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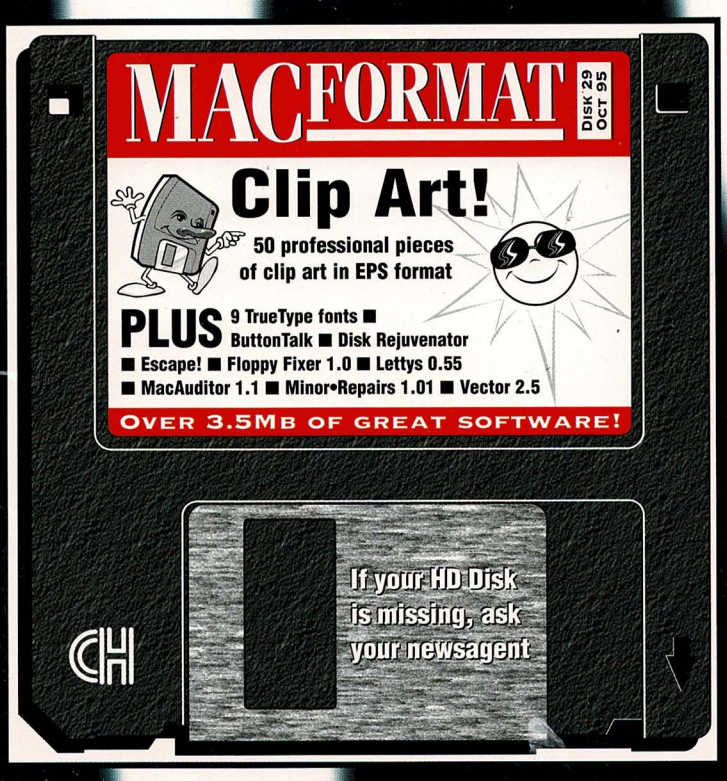
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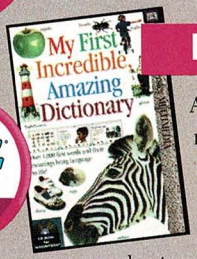
The Cat Came Back

Created by teachers and tested by kids, it's a great way to ensure an invaluable learning product. The Cat Came Back helps children improve their reading ability, enlarge their vocabulary and practice creative writing. All this while the child has fun following Mr Johnson's attempts to send his cat away on various modes of transport. Don't worry though if you're a feline fan, you can guess from the title what happens! Age 5 - 9 (Early Primary) **CD SRP £17.01**

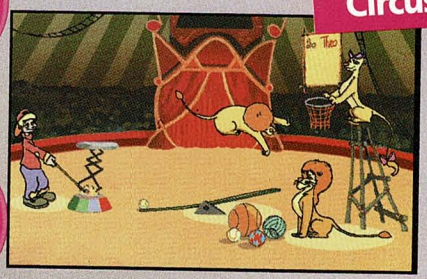
My First Incredible Amazing Dictionary



A fun imaginative way to entertain and teach the richness of the English language. Designed for young children, including those that cannot yet read or use a computer, it introduces more than 1,000 words and their meanings through spoken words, pictures, 3,000 sound effects and 850 animations. UK Edition: British spelling and pronunciation. **CD SRP £33.19**

a b c d e f g h i j k l m n o p q r s t u v w x y z
dog
A dog is a furry animal with a tail that wags. Dogs are usually kept as pets.
Dog words
Pets

Circus

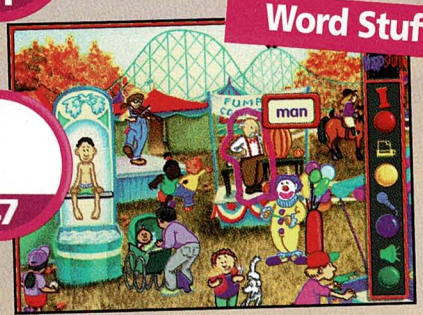


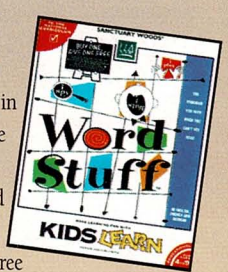
Explore the magical world of the Circus in this wonderful interactive cartoon. There are 30 places to visit, each with things to do or discover: explore the show tent where you can take part in a variety of acts; make up the clowns in their trailer; visit the animals backstage and play a series of instruments in the music tent. Crisp, fun animation encourages children to develop skills without even realising they are learning! **CD SRP £34.03**

Triazzle

Based on the best selling game by Dan Gilbert, Triazzle will entertain the entire family with beautiful graphics and noises inspired by the rainforest. Rotate and match the triangular pieces—simple to grasp, devilishly difficult to master! Easy option for kids and Star Triazzle for a real challenge. The CD ROM version includes a free Triazzle After Dark module. A donation is made to the 'Rainforest Alliance' with each copy sold. **CD or Floppy SRP £21.27**

Word Stuff





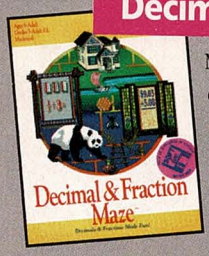
A delightful entertainment program for children that will give them a head start in reading. The excitement begins when you chose a playmate to join in one of four adventures - Fun in the Snow, Spring on the Farm, Weekend at Camp, or Games at the Fair - and continues as the playmate leads them to a scene where three great language-building activities are offered, I Spy, I Play and I Sing. Hard to understand concepts are brought to life with rich multimedia. Age 4 - 9 (Early Primary) **CD SRP £17.01**

KidsMath

This exciting educational math program for children includes eight entertaining activities designed to teach and reinforce basic math concepts. Using brilliant colour, graphics, animation and sound, it teaches, motivates and entertains with a variety that keeps kids coming back to KidsMath again and again. The perfect classroom tool for reinforcing basic math skills, without the supervision of an adult.. Ages 3 - 8 **SRP £34.03**

Softline Summer Savings At These Resellers

Decimal & Fraction Maze



Make learning decimals and fractions fun with this exciting educational math program. This powerful tool includes a complete range of decimal and fraction problems that cover 17 math skills. It also includes over 440 learning levels which automatically progress as skills are mastered at your own pace. Ages 8 - Adult **SRP £42.54**

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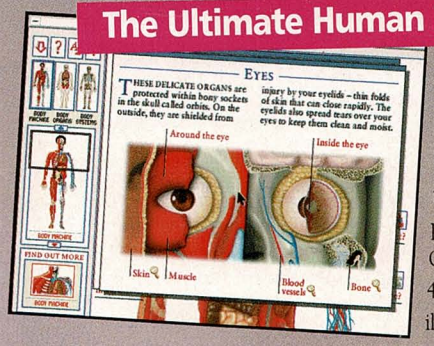
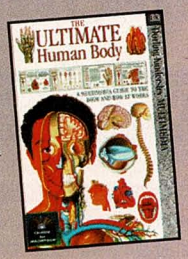
The Ultimate Human Body





Take an interactive journey inside the human body to discover what every part of the body is called, see where it is situated, what it looks like and how it functions. Explore the body through three intuitive, easy-to-use search paths — The Body Machine, The Body Organs and The Body Systems. Over 100 animations, 45 minutes of audio, 1400 sounds and over 1000 illustrations. **CD SRP £50.21**

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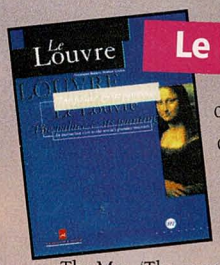
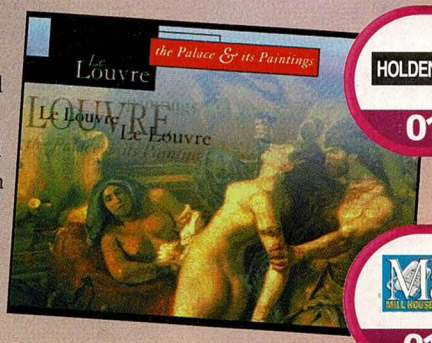
Le Louvre





Journey through the world famous art gallery with the aid of models, blueprints and over $2^{1/2}$ hours of detailed commentary. Examine paintings in detail and even learn about their form and composition via clear animation and narration. 'a tasteful, elegant & sophisticated CD ROM.' –Rated 5/5 The Mac. 'The most comprehensive and powerful display of art through the vehicle of multimedia' –The Bookseller **CD SRP £38.29**

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Digby's Adventure

A charming program filled with endearing characters like Bertram, a wise old St Bernard; Duffy and Lizzy, the streetwise cat and mouse; Skunkly, the sweet skunk and of course Digby, the one pound dog. There are three separate storylines and with exciting games, activities, original songs, an interactive mix-your-own music studio and important lessons about problem-solving and teamwork—your child is sure to enjoy all three! **CD SRP £17.01**

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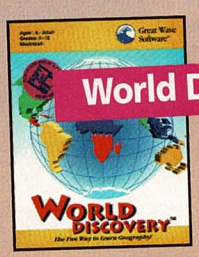
World Discovery



An exciting, interactive global geography and history program that tests your knowledge of geographical, political and historical people, places and events. This fun and educational program contains 19 maps from around the world. Each colourful map can show countries, states, cities, mountain ranges, rivers, lakes, seas, oceans and much more! Ages 8 - Adult **SRP £42.54**

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KidsTime Deluxe

The multi-award winning KidsTime Deluxe includes five fun, educational, challenging programs to help kids explore the creative learning world of the computer. Designed by educators and parents this contains a variety of activities using colour, graphics, sound and animation to introduce computer skills and encourage creativity. Ages 3 - 8 **SRP £34.03**

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MACFORMAT

ISSUE 29 ■ OCTOBER 1995

The Finder

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Improve your image 56

What do you do when your artwork or photographs don't come out as you intended? You turn straight to our new series showing you how to improve, retouch, and add special effects to your images. Lose those wrinkles!

Make e-mail easy 61

E-mail is *the* new form of communication. In the third part of our in-depth Internet series, we show you how it works, especially the complicated bits...

Master the spreadsheet basics 65

We explain how to plan your spreadsheet and move the cell contents around. Then you can follow our guide to setting up a spreadsheet to analyse your monthly expenses.

Music: ghost track busters! 68

Want to achieve instant harmony, creepy echoes, big bass lines and virtuoso piano tracks in your Mac-based music? Here's how: use ghost tracks!

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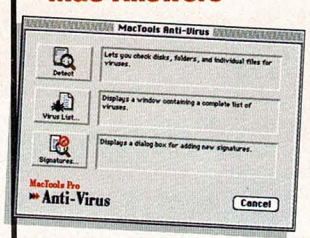


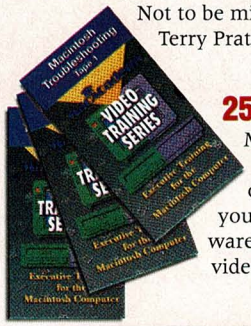
Once again we set our experts loose on your Mac problems. This month they tear into Extension clashes, rip apart print problems, and mangle a few network queries.

WIN! WIN! WIN!

Ten Discworld posters 128

We have ten beautifully detailed lithographs of the Librarian (from the books and game) to be won! Not to be missed if you're a serious Terry Pratchett fan.

25 Training videos 146



MacAcademy training videos are just like having your own expert on hand to help you master your Mac and software. You could win up to five videos from their selection.

REGULARS

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Who we are, what we're about, and what we hate.

Your Web Pages 14

Now you can read MACFORMAT on the World Wide Web too – here's the lowdown on what you'll find when you log on.

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MACFORMAT's biggest news section ever! New Macs and PowerBooks from Apple, while the first Mac-compatibles reach the UK at last. And there's all the hot new releases direct from the Mac Expo show in Boston – the biggest Mac event of the summer.

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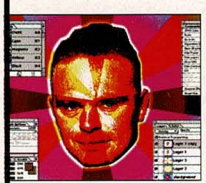
The latest product news, from a convenient way of scanning text or numbers straight into any program to software you can use to talk to your Mac.

Apple Talk: Letters 36

Is *Out of the Sun* racist? Is MACFORMAT sexist? All these existential dilemmas and more.



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The only comic strip that tells the truth about how your Mac *really* works...

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BLACK & WHITE

DTP DESIGN PRINTERS CLIP ART

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Better mono output 46
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KPT Vector Effects: sexy add-ons for *FreeHand* and *Illustrator.*
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COVER DISKS

MACFORMAT comes with a choice of CD-ROM or high-density disk every month:

Your CD-ROM 8
Complete Wayzata clip art collection, plus samples from the *Cartesia*, *Instant Art* and *Mountain High Maps* collections. Puzzle your way round our *Discworld* demo, gasp at the *Stowaway* multimedia demo, and try our Bomb Busting utilities. Plus, clip photos and everything below...

Your Cover Disk 12
ButtonTalk story maker; the puzzling *Three's*; TrueType fonts; Wayzata clip art and more...

Welcome to MACFORMAT

Everything you wanted to know about MACFORMAT, plus some of our *least* favourite (Mac-related) things...

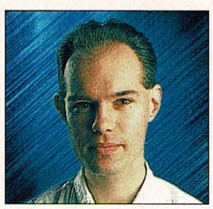
ABOUT OUR WRITERS

ALEX SUMMERSBY

Alex learned all he knows about Macs by using them, and his pet hate is how if you *accidentally* double-click on a file, you have to just sit there and watch the application laboriously load (on his IIsi, that can take a while) and can't abort it.

DEREK SMITH

Our Mac technical expert is soon to join Future Publishing's Mac Services department. So does he complain about EtherNet LANs? SIMMs? No. He moans about the way you only get a mess of pixels when you zoom into a QuickTime screen.

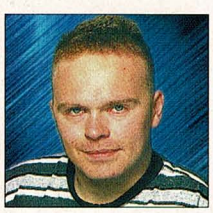


RICHARD HILL

Our multimedia man and News Editor spends a lot of his time passing news of what's going on in the world to the rest of us. His least favourite bit of the Mac interface is that over-complicated, illogical Chooser/Network/Sharing Setup stuff.

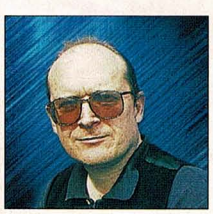
ROD LAWTON

This issue Rod tackles *HyperCard*, printers, DTP, spreadsheets and utilities too. All at once? No wonder he complains about that very frustrating button in the alert box you get when you crash – the one that says 'Restart'. Never works, does it.



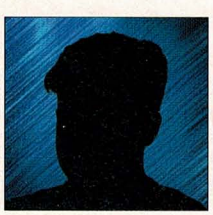
MARCUS DYSON

Marcus heads the multimedia division of a top software house, and his pet hate is the way volumes don't stay where you put 'em on the Desktop. He keeps losing his three hard drive icons among all the floppies, shared disks and CDs.



BRIAN LARKMAN

Our graphics expert often has to let his Mac get on with a 3D render or image processing task. His major frustration is the way the Applications menu fools you into thinking you can try doing something else at the same time...



YOU?

The MACFORMAT team's big collective gripe is that we're soon to lose Derek. Could you fill his little green shoes as Technical Editor? Or are you an expert in some Mac area who'd like to write for us freelance? Contact us now, if not sooner!

ABOUT MACFORMAT

Welcome again to MACFORMAT, Britain's best-selling Mac magazine! Whether you're a veteran or a novice, we'll help you get more out of your Macintosh, whatever you use it for!

Every month, MACFORMAT brings you tips, techniques and tutorials covering the range of Mac applications, from graphics, DTP, education, spreadsheets and databases to music, comms and games. This month we help you get into the Internet, master those spreadsheets, perform image magic and more.

We'll bring you features about exciting Mac developments and novel uses, accompanied by cover disk programs whenever possible, so you can discover what your machine can do and try things you mightn't have tried before – perhaps learn French with your Mac!

We'll keep you up-to-date with all the Mac-related news, and also keep you informed about the wider issues, the people behind the headlines and the stories behind the stories. This issue, we have all the very latest news hot from the recent Macworld Expo in Boston, the world's premier Mac show.

We'll bring you authoritative reviews of interesting and affordable products, with clear buying recommendations. This issue we test the top mono laser printers, put some exciting new graphics programs through their paces, try out the new Zip drive, look into CD-ROM encyclopaedias, and much more besides...

MACFORMAT does not review demos or unfinished programs. We review only the finished products you could buy yourself, to help you decide whether to buy or not.

MACFORMAT's covermounted disks and CD-ROMs offer you demos so you can try software before you buy, useful utilities (specially chosen to complement features in the magazine, including a complete clip art package this issue), selected shareware programs, games, readers' contributions and more. This issue's details start on page 8.

Editorial enquiries:
MACFORMAT, Future Publishing Ltd, 30 Monmouth Street, Bath BA1 2BW or tel: 01225 442244, fax: 01225 446019
E-mail: macformat@futurenet.co.uk or **macformat@cix.compulink.co.uk**
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ABOUT OUR REVIEWS

Every MACFORMAT review is designed to inform you in detail of what you'd be getting if you bought the product and help you decide whether it's worth your money. It tells you the essentials, without jargon. MACFORMAT reviews only finished products, and we rate them on this scale:

- 80+% means excellent.
- 70+% means well worthwhile, though not really outstanding in its market.
- 60+% means good, but with a few shortcomings or some limitations.
- 50+% means acceptable but flawed.
- A rating below 50% means you should think carefully before parting with your money.

The MACFORMAT Classic Award

If a product earns a rating of 90% or more, we'll give it a MACFORMAT Classic Award. This means what it says: we judge the product to be a classic, a standard-setter of its type, something really special.

- We make every effort to verify all the information we publish, but products and prices do change. We always quote list prices (RRPs), but street prices do vary. Shop around, and check with the supplier before buying to make sure that the product you're considering will meet your needs. MACFORMAT cannot accept responsibility for any errors or omissions or for any losses that may arise as a result, but it is our policy to correct any errors of fact whenever we possibly can.
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- We're up against it, so we can't reply to mail personally, even if you include an SAE, or to faxes or e-mail. Nor can we answer technical queries over the phone – sorry!

Foul Play

Mystery at Awkward Manor

Something Terrible has happened at Awkward Manor !

A Photo-Realistic Game for the Whole Family
1-6 Players Ages 7+

AN ARMCHAIR TRAVEL PRESENTATION

PRODUCER WILLIAM BECKETT DIRECTOR WILLIAM DONELSON

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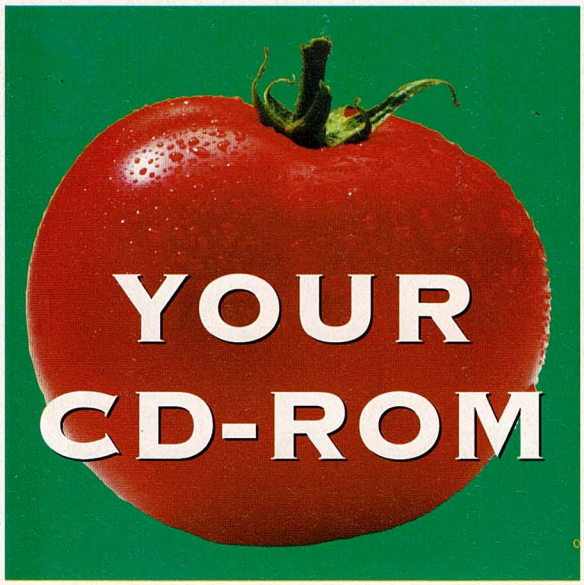
Level Ten Prize Drawing

When you solve a Level Ten Game, send in the enclosed card to enter a quarterly Prize Drawing for a chance to win a fabulous multimedia computer system!
(Drawings held in Jan, Apr, July, and Oct each year. Final drawing in Jan 1997)

Void where prohibited



In a world of graphic violence, we are pleased to bring you an extremely graphic CD-ROM. Derek Smith dons his long, beige raincoat and reveals all...

After last month's clip photo special, we bring you another 55 amazing photos. If you have more humble needs, we have a complete collection of Wayzata clip art, and samples from several commercial clip art products. But what do you do if your Mac isn't well enough to enjoy all this art? Not to worry, we also have a complete folder of Bomb Busting utilities. Before we go any further, let's take a look at what all those folders contain...

- **Bomb Busters:** shareware utilities to help solve your Mac problems.
- **Clip Art:** samples from some of the products reviewed in our clip art round up, which starts on page 50.
- **Clip Photos:** high resolution photos from the best collections around.
- **Demos:** interactive and rolling demos of various software reviewed in this issue of MACFORMAT.
- **Floppy:** most of the software featured on the floppy disk (page 12).
- **Readers' Corner:** your section containing programs and artwork.
- **Realms pages:** sample pages from *Australian Realms* magazine, produced entirely with *ClarisWorks*. See page 41.
- **Resources:** with useful software to get the most from your CD-ROM.
- **Shareware City:** the best shareware released on the Net this month.
- **Shareware in MACFORMAT:** most of the shareware reviewed in our shareware section, on page 117.
- **Wayzata:** complete collection of clip art from the Wayzata software stable.

FLOPPY OR CD?

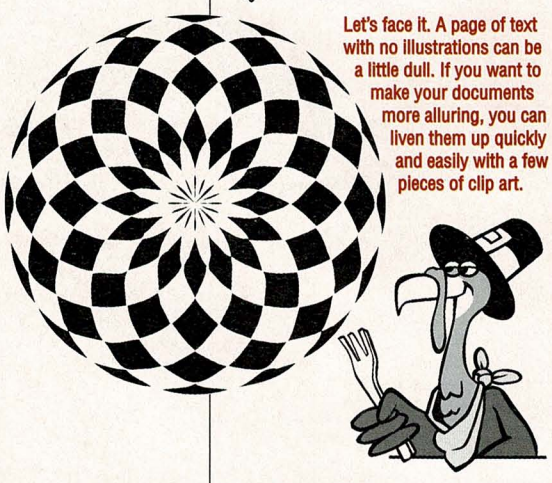
MACFORMAT is available in two editions every month: one with a CD-ROM and one with a high-density floppy disk. The CD contains all the software on the floppy disk in a folder called Floppy. See page 12 for details.

Wayzata

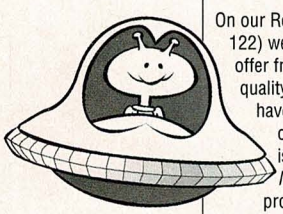
Clip art

Requires: any Mac

Let's face it. A page of text with no illustrations can be a little dull. If you want to make your documents more alluring, you can liven them up quickly and easily with a few pieces of clip art.



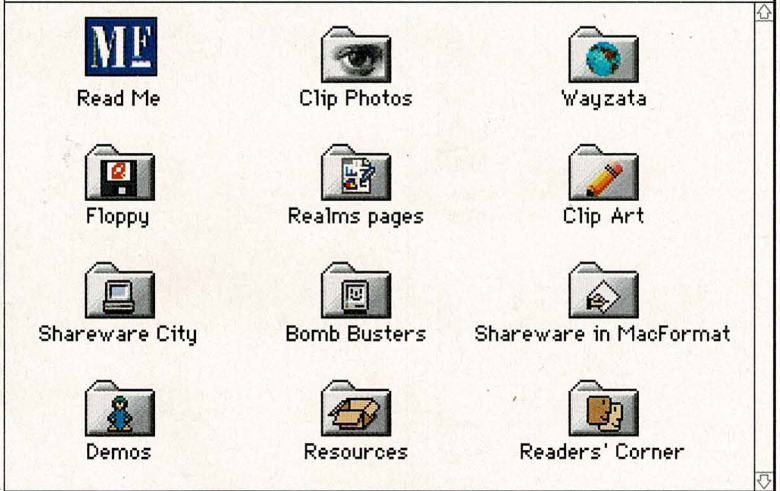
On our Reader Offer pages this month (page 122) we have an excellent 10-pack CD offer from Wayzata. To show you the quality of the images on these CDs, we have included all the clip art from one of those discs. Each piece of clip art is in three formats: *FreeHand* EPS, *Illustrator* EPS, and TIFF. Most programs can open at least one of these three formats – for instance, in *ClarisWorks*, you can open the *Illustrator* files. Because they are in EPS format, they can be resized without loss of quality.



MACFORMAT 29

633.3 MB in disk

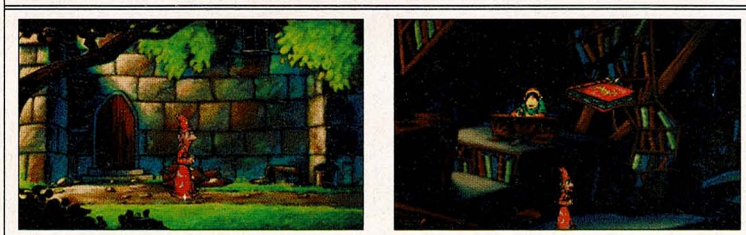
Over 7,000 files of photos, clip art, shareware, demos and much, much more



Discworld

Game demo

Requires: LCII or better, colour monitor



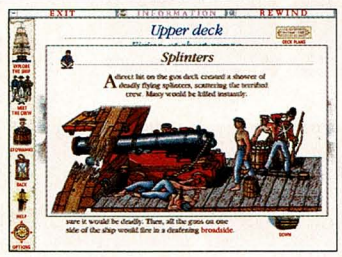
***Discworld* is simple to navigate, which is just as well with two time zones to confuse you. Click on the screen to walk to a location, and double-click to carry out an action.**

Terry Pratchett devised his own strange and wacky world, populated it with even stranger characters, then wrote a series of bestselling books about it. His world has now made it to the Mac in a wonderful game – reviewed on page 127. Here's your chance to sample the gameplay for yourself, but be sure to look at the Read Me file before you start.

Stowaway

Multimedia demo

Requires: colour Mac



This CD pulls no punches about the often dismal conditions on board 18th and 19th century galleons. Captain Pugwash it isn't.

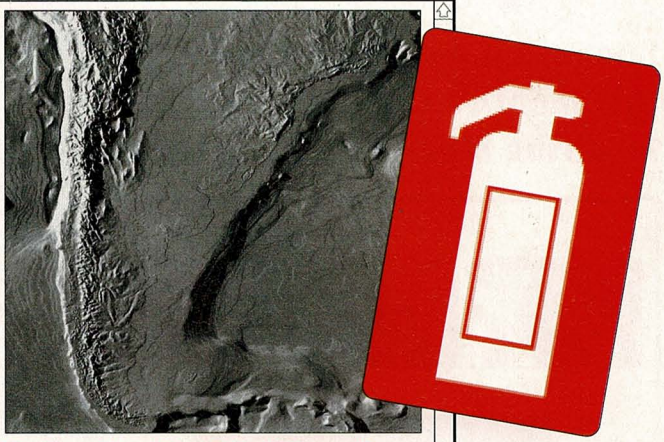
Stowaway is the latest title from Dorling Kindersley, and reveals the true story of what life was like on board an old galleon. This rolling demo will give you a good idea of the program's style, and you can read the MACFORMAT review on page 95.

Clip Art

Samples

Requires: any Mac

As part of our clip art round up, which starts on page 50, we have samples from *Cartesia, Instant Art,* and *Mountain High Maps.* Once you have read the reviews, take a look at the samples included here and draw your own conclusions. The files are in EPS and TIFF format, both of which can be opened with most programs, including *ClarisWorks* – a demo is on the CD.



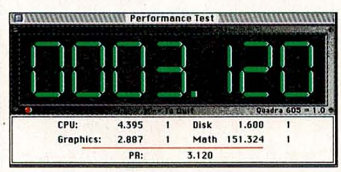
View the world in a different light with the versatile range of clip art on this issue's CD.

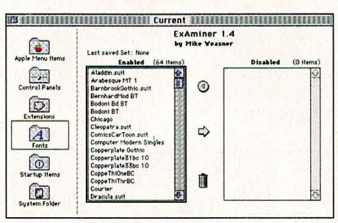
Bomb Busters

Utilities

Requires: see individual Read Me files

Keep your Mac healthy and happy with the wide range of Bomb Busting utilities on this month's CD-ROM.





MACFORMAT always strives to help you with your Mac, and this month we are proud to bring you the free *Bomb Busters* book, which details solutions to all common problems. To complement this, you can find a folder on the CD containing much of the software mentioned in the book, as well as many other great utilities. There are far too many to detail here, so take a look at the Read Me files for more information, but remember that some of the programs may cause trouble if used incorrectly.

Readers' Corner

Your contributions

Requires: see individual Read Me files

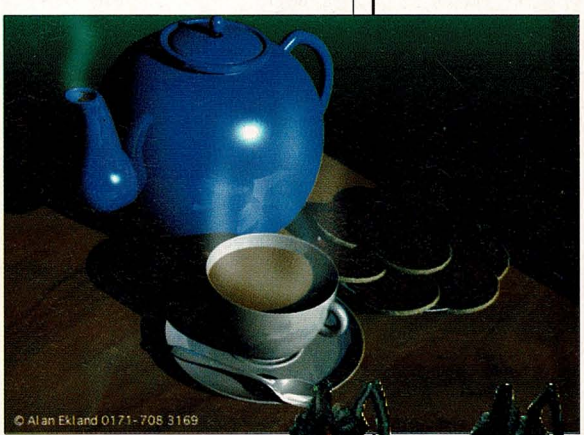
Your programs and art continue to flood in, and we are delighted to receive them. If you haven't contributed yet and would like to do so, simply send in your work to: Disk Editor, MACFORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW.

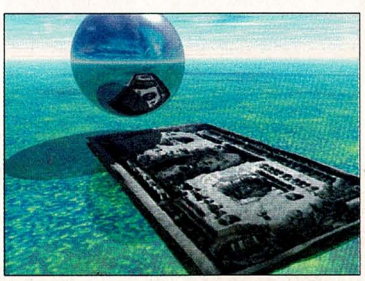
In the Art Gallery this month's prize goes to Arturo Stanig for some original patterns. Colin Robinson's artwork has made it onto the CD insert this month, a spot where we regularly feature your work. If you would like your piece to be considered for this prime site, please make sure that the resolution is at least 1,000 x 800 pixels.

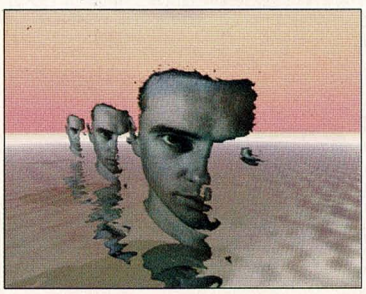
Meanwhile, in the contributions folder, there are plenty of *HyperCard* stacks, including a card index system from David Goodchild, a golf putting stack from Alex Karlsson, a Bible game from Terry Fletcher, and John Sudderth has sent in a calculus stack, so he'll be popular with school children everywhere.

Icons this month come from Michael Tedstone and Dick Jansson, who includes some folders with names on. I notice the editor gets his name on one of the folders, but I don't!

Søren Bech Jensen has something special for *Marathon* fans everywhere, while Gabriele de Simone has sent in a floppy disk utility which we will try to fit on our cover floppy soon. We always consider small items for the floppy as well, so you could be doubly famous.







Show off your talents to the world. Our CD edition is now bought by over 30,000 Mac enthusiasts every month!

VIRUS? SURELY NOT!

Don't worry if your virus checker gives you a warning about the CD. If you get an alert about an 'unknown strain of WDEF and CDEF', it's not a virus – it's just that we use an unusual Desktop file to ensure that the disk works with both Systems 6 and 7.

CUSTOM ICONS

The icons we use on the CD help to give it a friendly atmosphere, but they do slow it down. Install *CDIcon-Killer,* which is in the Resources folder on the CD, if you want to speed things up.

Clip Photos

Look what we've got for you on this month's CD – 55 graphically inspiring high-res photographs.

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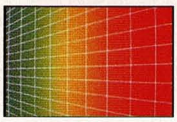
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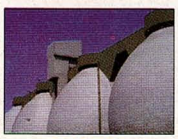
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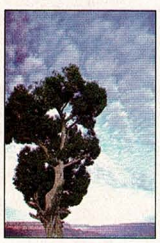
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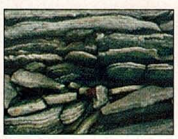
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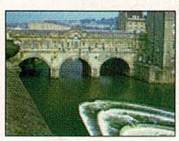
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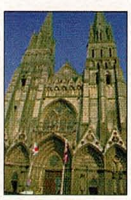
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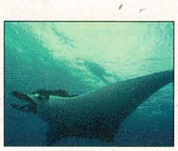
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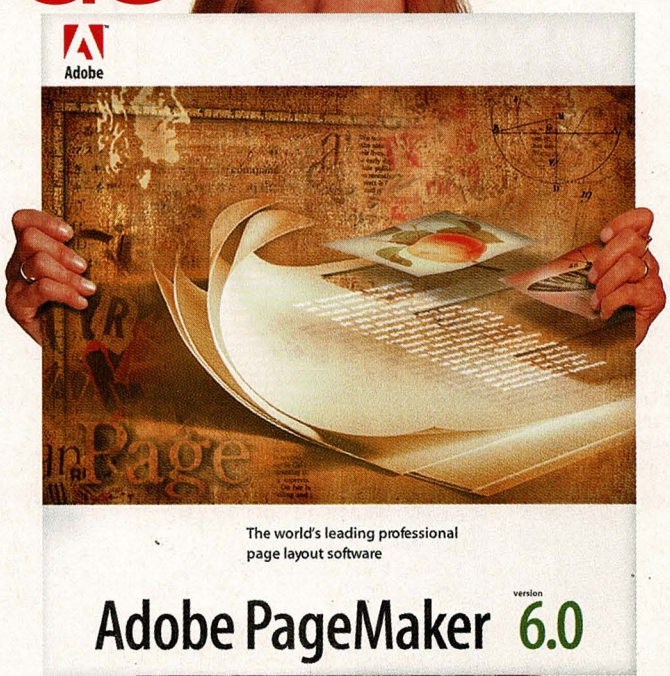

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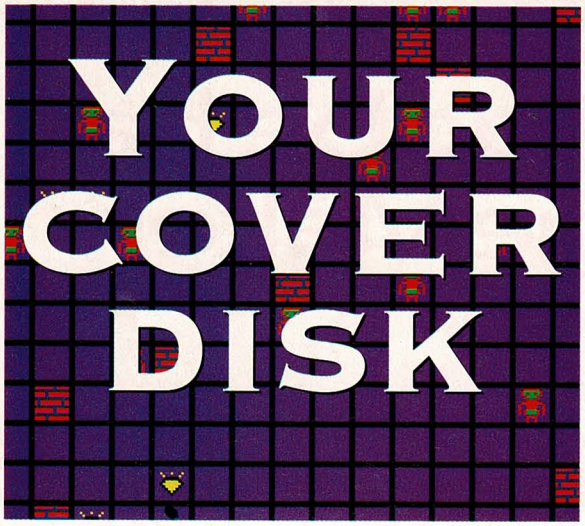
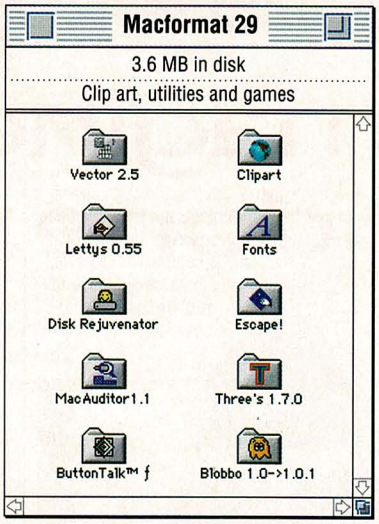


Never before have we managed to fit so much software onto one floppy disk. Sit back and let Derek Smith amaze you.

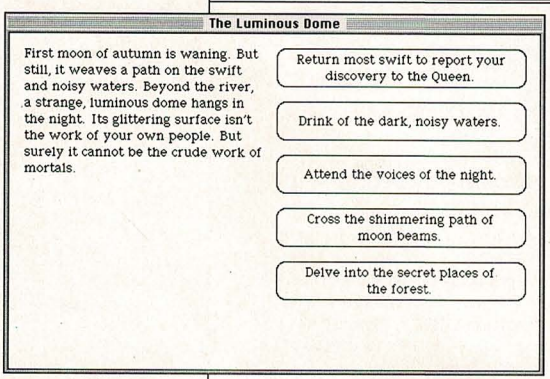
We've wanted to include clip art on the floppy disk for a while, but we haven't been able find any of a high enough quality. Now, thanks to Wayzata, we have. Also, we bring you a couple of our favourite games, and some wonderful utilities.



ButtonTalk

HyperCard stack

Requires: any Mac, *HyperCard*


The Luminous Dome
First moon of autumn is waning. But still, it weaves a path on the swift and noisy waters. Beyond the river, a strange, luminous dome hangs in the night. Its glittering surface isn't the work of your own people. But surely it cannot be the crude work of mortals.
Return most swift to report your discovery to the Queen.
Drink of the dark, noisy waters.
Attend the voices of the night.
Cross the shimmering path of moon beams.
Delve into the secret places of the forest.

Although the example that comes with *ButtonTalk* is a fantasy adventure, you can create stories in any style you like.

Ever seen those adventure books where you decide what happens in the story? You read a situation, then choose what you think to be the most appropriate action from a set list. This takes you to another scene, and another list of choices. These scenes can interconnect, making the story as elaborate as you like. *ButtonTalk* enables you to create such stories, ideal for developing your own interactive book, or for helping children develop literature skills.

Utilities

Various

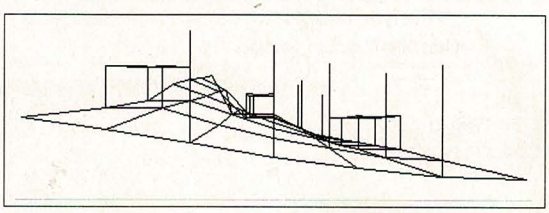
Requires: see individual Read Me files

Lettys is a simple but effective tool for teaching you to touch-type, or at least type faster. It even learns which letters you have problems with, and repeats those more often.

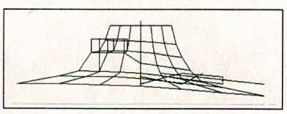
Disk Rejuvenator is from Aladdin Systems, the people who created *StuffIt*, and is designed to fix a problem that occurs with some disks – read the Read Me file for the technical detail.

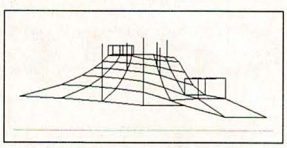
MacAuditor is a snoop of a program. It examines your disk and reports all the applications, Extensions and Control Panels it finds.

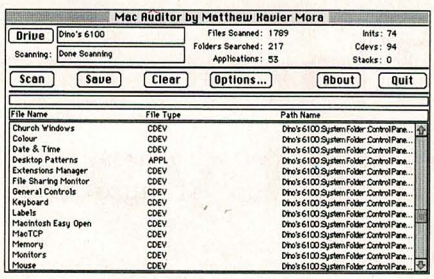
Vector is a graphics program that whizzes you through a three dimensional landscape. The most remarkable thing about it is its size – just 12K!



Experience three dimensional travel with *Vector* – one of the smallest programs you'll ever find.







START HERE

High density floppy disks normally contain a up to 1.4Mb of software, but to bring you as much as possible, we use a compression program to fit more on. So you need to decompress the software before using it – you'll need 3.6Mb of hard disk space. We also recommend that you make a backup of the MACFORMAT cover disk, just in case anything goes wrong. Here's what to do...

1 Ensure the original cover disk is write-protected (move the tab so that you can see through the hole).
2 Insert the MACFORMAT disk.
3 Drag the disk's icon over your hard disk's icon.
4 The contents are copied onto your hard disk, but are still compressed and cannot be used yet.
5 Drag the cover disk icon to the Wastebasket to eject the disk.
6 Insert a blank high density disk.
7 Drag the MACFORMAT 29 folder from your hard disk onto the blank disk's icon to make your backup.

To decompress the cover disk, open the MACFORMAT 29 folder on your hard disk.

1 Double-click on the MACFORMAT 29 icon.
2 Click **Continue**.
3 A box then asks you where you want to save the software. Choose the place on your hard disk where you want everything stored and click **Save**.

Before installing the cover disk, we always recommend that you back up any important work on your hard disk. This precaution will avoid problems should any of the software not be compatible with your setup. We make every effort to check our disks for compatibility and viruses, but the information here is intended as a guide only, and MACFORMAT cannot be held responsible for any damage to data, any inability to use this software or any resulting losses. So please, take the precaution of backing up first.

BLOBBO 1.0.1

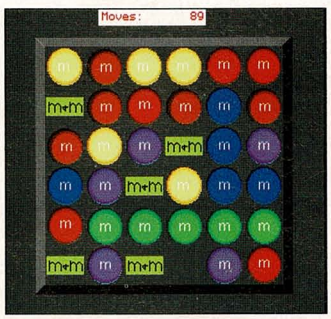
On MACFORMAT 22's floppy disk we featured a game called *Blobbo*. Unfortunately level 18 was impossible, but the author has now created this update to sort out the problem.

Three's

Game

Requires: any colour Mac

This is similar to the sliding tile puzzle that used to come with Macs, but with an intriguing difference. The idea is to get all the identical tiles in a horizontal or vertical line, where they can connect together. Once all the tiles are connected to their identical siblings, the game is completed. However, the trick is not to let them lock together until you are nearing the end. On the more advanced levels, you have to connect even more tiles together.



Line up the tiles to win the game, but it takes a lot of forward thinking to complete.

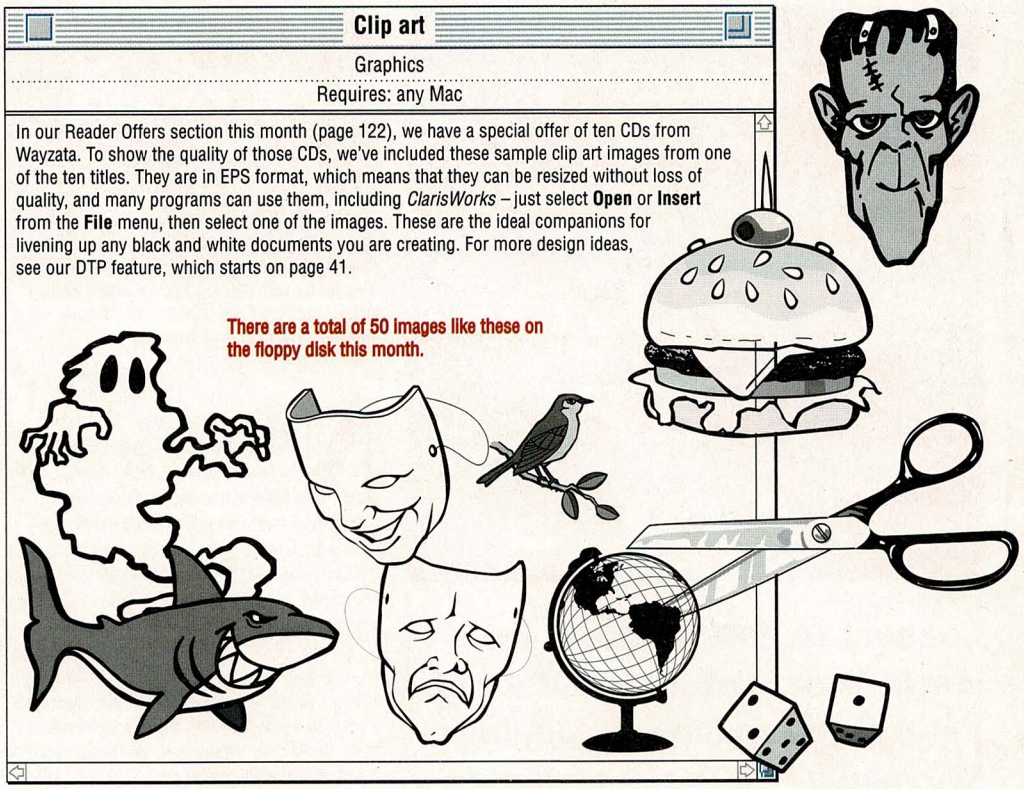
Clip art

Graphics

Requires: any Mac

In our Reader Offers section this month (page 122), we have a special offer of ten CDs from Wayzata. To show the quality of those CDs, we've included these sample clip art images from one of the ten titles. They are in EPS format, which means that they can be resized without loss of quality, and many programs can use them, including *ClarisWorks* – just select **Open** or **Insert** from the **File** menu, then select one of the images. These are the ideal companions for livening up any black and white documents you are creating. For more design ideas, see our DTP feature, which starts on page 41.

There are a total of 50 images like these on the floppy disk this month.



Fonts

TrueType Fonts

Requires: any Mac, System 7

HERE IS ADONAIS FONT
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Here is Kashmir Font
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Here is Columba Font
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

HERE IS INDUSTRIAL FONT
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ

If you want to make your documents more interesting, what better thing to complement your clip art than a selection of great fonts. We have included no less than nine fonts, all in TrueType format, which means that they will work with any programs and printers. To install them, just drag the Suitcase icon onto your System Folder. (If you have System 6, you'll need the TrueType Extension use them.) If you have any programs already open, you'll need to quit then relaunch them to before you can use these fonts.

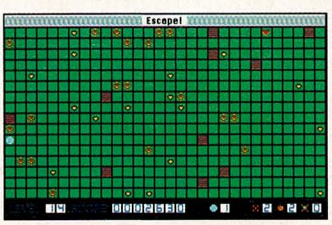
Like socks and undies, you can never have too many fonts.

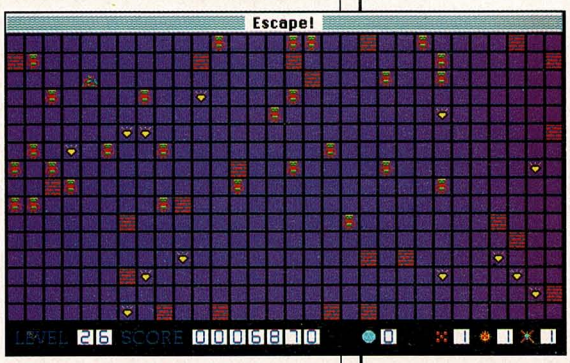
Escape

Game

Requires: any Mac, System 6.0.5 or later

This is an adaptation of the classic *Daleks* game. You start each level with a number of homicidal robots intent on killing you. Every time you move one step, they move one step in a straight line towards you. To stop them reaching you, you have several options. First, you can make them bash into each other, resulting in a heap of broken robots. Any other robot that then walks into the heap is also destroyed. You have a limited number of weapons for when they get too close, or you can transport to a random location on the screen. Just hope you don't find yourself next to a robot when you do!





Collect the diamonds for points. The more robots that are alive when you collect a diamond, the more points you get.

FLOPPY TOO

We are always on the lookout for readers' contributions for the floppy as well as the CD, so don't be put off just because you don't have a CD-ROM drive. Send them in to the address on page 6.

GOT A PROBLEM?

If the cover-mounted high density disk or CD-ROM you have is defective, return it to us and we will replace it. Please make sure you have followed the installation procedures described in these pages correctly, to ensure that there is a physical problem with the floppy disk itself. Otherwise, the replacement will be just the same!

Return HD disks to:
Discopy Labs
PO Box 21
Daventry
NN11 5BU

Return CD-ROMs to:
MACFORMAT CD returns
Future Publishing
FREEPOST (BS4900)
Somerton
Somerset
TA11 6BR

Enclose a self-addressed padded envelope (but we'll pay return postage) with the disk or CD, and a description of the fault. Please do not return disks or CDs to the editorial office; we don't hold any stocks of them and can only refer you to the addresses above.

Connect to FutureNet on the World Wide Web and visit all of Future's magazines, including MACFORMAT. While you're there, why not visit a few other useful and entertaining Internet sites?

Getting connected

All you need to connect to FutureNet is a modem and an Internet account like Demon or CityScape, or a direct server connection. There are no hidden charges – FutureNet is absolutely free!

Just use your World Wide Web browser to connect to

http://www.futurenet.co.uk/

Find out for yourself how Apple's virtual reality technology works and try out a few clips by jumping straight to their Web site.

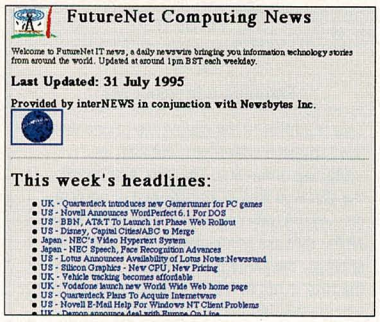
Not only can you now read MACFORMAT's pages on FutureNet (Future Publishing's on-line service); you can also use them as a starting point to find sites that give you more information on some of the topics featured in this issue. It's like having a giant library at your fingertips.

To use these links, you must have a Mac that's connected to the World Wide Web – take a look at our current series on the Net for details of what you need and what else you can do. Part three is on page 61.

As well as regular news and sample features, MACFORMAT's pages give you a sneak preview of each issue's contents before the magazine goes on sale. We also provide links to any Web site mentioned during this issue, found in the Computing area of the Road Map. And our Jumplist index welcomes additions – jumplists are compilations of information you'll find across the Net, and our index gives you access to the best Mac reference sources.

We register a 'hit' every time someone looks at a page or image, and, according to our latest figures, FutureNet is now receiving over 100,000 hits each *day*.

RICHARD HILL


FutureNet Computing News
Welcome to FutureNet IT news, a daily newswire bringing you information technology stories from around the world. Updated at around 1pm BST each weekday.
Last Updated: 31 July 1995
Provided by interNEWS in conjunction with Newsbytes Inc.
This week's headlines:
UK - Quarterdeck introduces new Gamerunner for PC games
US - Novell Announces WordPerfect 6.1 For DOS
US - BBN, AT&T To Launch 1st Phase Web Rollout
US - Disney, Capital Cities/ABC to Merge
Japan - NEC's Video Hypertext System
Japan - NEC Speech, Face Recognition Advances
US - Lotus Announces Availability of Lotus Notes:Newsstand
US - Silicon Graphics - New CPU, New Pricing
UK - Vehicle tracking becomes affordable
UK - Vodafone launch new World Wide Web home page
US - Quarterdeck Plans To Acquire Internetware
US - Novell E-Mail Help For Windows NT Client Problems

FutureNet now includes a computer news section, which is updated with all the latest stories every day. Who needs *The Six O'Clock News?*

.net - The Internet Magazine - the UK's best-selling Internet mag and the most popular title on FutureNet. We've got the whole of the sold-out issue 1 on this site, plus loads of good stuff from every issue since.
The .net Directory - the Definitive Guide To The On-Line World. A sprawling, unholy extension of .net's directory section. Huge, definitive (as we've already said) and comprehensive.
Amiga Format - the biggest-selling Amiga title in the world, AF covers the spectrum of Amiga computing and entertainment. Check out AF's blow-by-blow account of the Escom buyout, exclusive to this site.
Amiga Shopper - if you're serious about your Amiga, then AS is seriously for you. No games, just 100% info for power users.
CD-ROM Today - now a dedicated PC mag, CD-ROM Today gives you the best buying recommendations on hundreds of CD-ROM titles, plus insight into the exciting development of interactive multimedia products.
Commodore Format - so you thought the C64 was dead? CF is still chugging along with game reviews, tips, cheats and all manner of projects for this long-in-the-tooth machine.
MacFormat - Britain's best-selling mag for Apple Macintosh users. From serious applications to leisure, MF covers the lot.
PC Answers - Got a PC at home? Need the best advice on how to get the most out of it? PCA delivers answers to all your questions.
PC Attack - nip-snorting review coverage of the PC games scene from a magazine positively bursting with enthusiasm. A must for PC games freaks.

Every one of Future's three dozen magazines has pages on-line – it's your chance to have a good old nose around before you make your purchase.

MACFORMAT's Jumplist index gives you direct access to loads of Web sites, containing all the Mac resources you could possibly need.

LINKS FOR THIS ISSUE

You can visit any of these sites by typing its address (which you can find below the title) into the Location line of your Web browser. Or you can go to the World Wide Web Road Map section of MACFORMAT's pages on FutureNet. You can find direct links to each of these sites, to any addresses mentioned elsewhere in this issue and to dozens of others. This issue's links will be maintained until at least Friday 1 December 1995.

Computing

Armchair-Travel Co.
http://www.armchair-travel.com/
The company behind *Foul Play* are also working with Apple's QuickTime VR system. Download some of their trial clips, and take a look at the amazing things they're doing, including a full view of the insides of a Russian submarine.
Foul Play review, page 130.

QuickTime VR
http://qtvr.quicktime.apple.com/
This is the main site for finding out about the Apple technology that enables you to explore virtual spaces on your Mac. Log onto this site and you can discover how it works for yourself, and download the many clips available – as well as the software you need to see them.

Design & Graphics

Anton's FreeHand Page
http://www.euro.net/ecompany/afpindex.html
Whether you're an expert with Macromedia's drawing program or are just starting to get to grips with it, this site has hints and tips to help you. It also includes demos and free programs to enhance your use of *FreeHand.*

Graphion's Online Type Museum
http://www.slip.net/~graphion/museum.html
Take a guided tour of the history of type. Access this site, and you can discover the key people who have developed the art of typography over the last centuries, and see how printing and typesetting technology has developed up until the current day.
DTP feature, page 41.

tile.net Listserv Index
http://www.tile.net/tile/listserv/index.html
A superb reference source which you can use to easily find out the mailing lists you can subscribe to by e-mail. With lists grouped by name or subject, as well as a search facility, you can find the right mailing list for you. And each entry comes with full instructions on how to subscribe and get involved with discussions.
E-mail made e-asy, page 61.

General

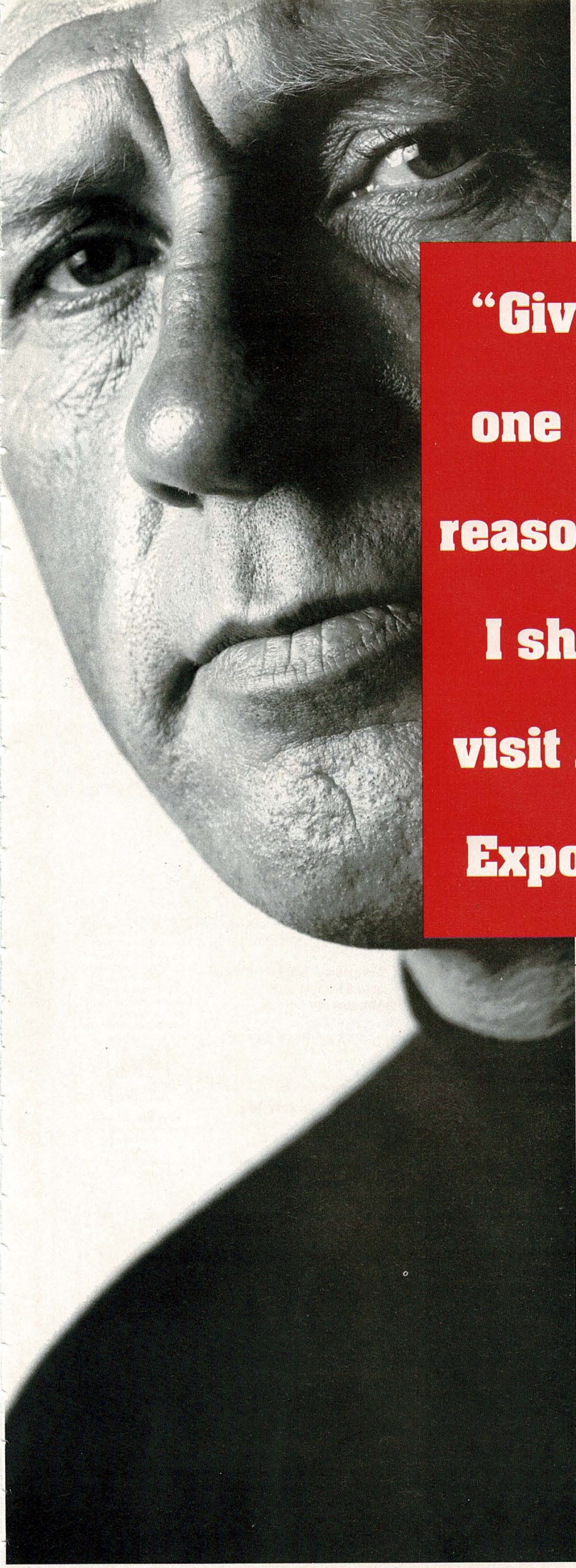
Terry Pratchett
http://rowlf.cc.wwu.edu:8080/~n9146070/pratchett.html
If you want to find out more about the author of the *Discworld* novels, here's the place to start – an introduction to the man and his work, plus your chance to get in touch with Pratchett fans on the Net.
Discworld review, page 127.

Global Encyclopedia
http://www.halcyon.com/jensen/encyclopedia/welcome.html
A fascinating new project where you're invited to contribute your knowledge to what's intended to be a giant, free-for-all reference source. It's no *Encarta* yet, but who knows – maybe one day...
1995 multimedia encyclopedia round-up, page 87.

Jumplists

MacLinQ
http://www.wsmith.com/macling/
It claims to be 'the coolest Mac site on the Web'. Plunge into this pool of Mac resources and links, take a good look round, and decide for yourself.

Welcome to Macintosh
http://www.astro.nwu.edu/lentz/mac/home-mac.html
This Web site provides plenty of links to useful Mac material, particularly if you're interested in the serious side of Mac use, like programming.



"Give me one good reason why I should visit Apple Expo '95"

Well, that's easy – there's no doubt that a visit to Apple Expo '95 is the best way to see and try out for yourself hundreds of the latest developments in Apple technology. From 8th – 11th November, over 250 of the leading suppliers will be demonstrating amazing innovations, giving free advice and detailed guidance for all levels of experience. **Do you still need a reason to go? Fine. Here are ten. At Apple Expo '95 you can...**

- **Be amongst the first to see and test new releases, products and services**
- **Pick up expert advice in the popular free seminar programme**
- **Understand the impact of major issues like cloning and compatibility**
- **See state-of-the-art technology for pre-press in action at the Pre-Press Forum**
- **Learn Adobe Photoshop, Macromedia Director or Quark Xpress in the hands-on MacUniversity Workshops**
- **Understand the practical applications of multimedia and desktop video through live demonstrations in the Multimedia Arena**
- **Explore the potential of the Internet in our free, hands-on testing centre – or from the leading suppliers in ExpoNet**
- **Discover how the current innovations in the Mac market will affect your business in the future at the Strategic Conference**
- **See the range of practical applications of the Newton in the Newton Business Centre**
- **Put your Mac-questions to the team in The MacUser/The Mac Advice Centre**

and here's another...

Save £10 – free entry to pre-registered visitors

Call the **Pre-registration Hotline on 0181-984 7711** or return this coupon by 16th October for free entry. You will receive a personalised badge and full details of the seminar programme and show's features in the Official Preview.

If you do not pre-register by 16th October there will be a charge of £10 at the door.

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Apple expo 1995 Sponsored by MacUser
8 - 11 November
OLYMPIA LONDON MAC

Children under 16 will be admitted on Saturday 11th only. The ruling will be strictly two children per accompanying adult. This restriction has been set to safeguard children during a very popular show. There will be no charge for children.

Apple Expo is organised by Emap Computing Ltd, part of Emap Business Communications Sponsored by MacUser and The Mac. Apple Expo is an independent exhibition not affiliated with the Apple Computer Group of companies. Apple is a registered trademark of Apple Computer Inc. The Apple Expo logo is copyright of Apple Computer Inc, January 1992.

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THE ALL-IN-ONE MACINTOSH!!

Great for the office, ideal in the home! Here is a CW fast Power Mac with a superb built-in 15" monitor, quad speed CD drive, stereo speakers and 3.5" HD floppy drive. Plus it can even have a built-in TV tuner!! It's no slouch either thanks to a 75Mhz 603 PowerPC processor and 256K level 2 cache. Effective 7100/66 performance meaning it's ready to rip through multimedia and high-end business tasks with blinding speed.

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NOW UTILITIES v5 Includes: WYSIWYG font menus, Auto Compression, Super Boomerang & more!

DATEBOOK PRO Superb business planner

TOUCHBASE PRO Contact manager

- Motorola 75Mhz 603 processor with 256k of level 2 cache
- 8Mb RAM expandable to 72Mb
- 500Mb internal Drive
- Built-in 15" color monitor
- Built-in Quad Speed CD player
- Built-in stereo speakers & mic
- SCSI interface
- Complete with keyboard & mouse
- Optional TV tuner + remote control

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5200/75 8/500CD + FREE NOW SOFTWARE

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50 ONLY

Pictured with optional 15" monitor

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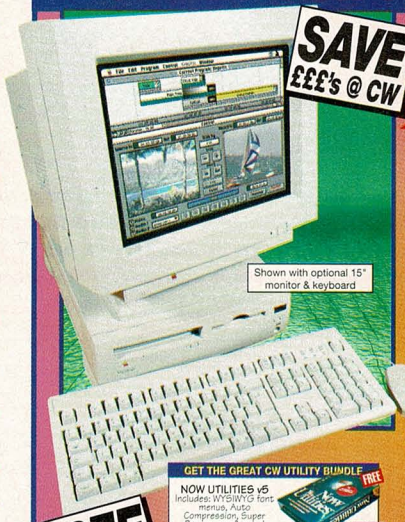
POWER MAC 6200



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Shown with optional 15" monitor & keyboard

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- Optional TV Tuner/Video in with remote
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MACINTOSH 630

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- **VERY LIMITED STOCKS!! We only have 50 of these ex-warehouse units on offer at this price. Don't miss out! Call today.**

THE CW SPEC CHECK

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- *Accelerator slot for adding PowerPC upgrade or Ethernet*

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The NEW Power Mac 7200 series offer superb expandability and beefy performance making them ideal for small and medium-sized business, home office and general graphics tasks. Like other 7000 series Power Macs, the 7200 comes with 3 PCI slots, built-in video supporting screen resolutions up to 1,280 by 1,024 pixels, plus the choice of 75Mhz or 90Mhz PowerPC 601 processor.

CW's 7200/75 comes with:

- PowerPC 601 @ 75Mhz with 32k on-chip cache
- 8Mb of RAM, expandable to 256Mb (DIMMs)
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- **FREE CW quality Extended Keyboard!**
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FREE NOW SOFTWARE WITH THIS MAC!!

NOW CONTACT
Superb contact manager with intelligent links to Now Up-To-Date.

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Organize your life with this excellent scheduler which works in harmony with Now Contact.

7200/75 8MB RAM + 500MB HARD DRIVE
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FREE SOFTWARE

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FREE SOFTWARE

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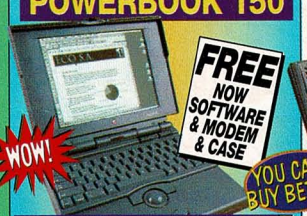
IMPORTANT INFORMATION

The above B100's are Ex-Warehouse and may have damaged packaging.
All come with 1 year Apple On-Site Warranty.

POWERBOOK 150



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WOW!

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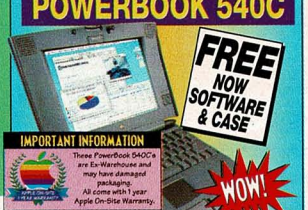
POWERBOOK 540C



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WOW!

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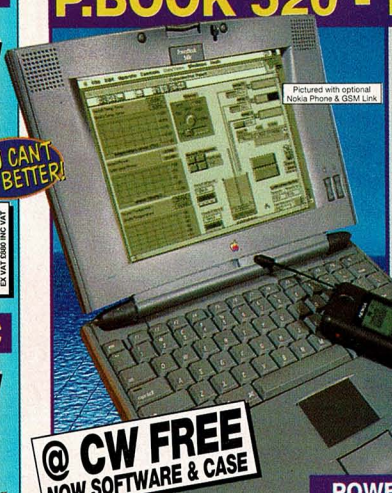

@ CW FREE NOW SOFTWARE & CASE

IMPORTANT INFORMATION
These PowerBook 520's are Ex-Warehouse and may have damaged packaging.
All come with 1 year Apple On-Site Warranty.

POWERBOOK 520 - BEST CW VALUE!

The CW recommended 520 desktop Quadra matching speed, **FREE NOW SOFTWARE** and **FREE CARRY CASE!** Just think what you could do with an on-the-move Mac that provides the same functionality and friendly way of working as your desktop Macintosh. - Hurry CW only has limited stocks of these ex-warehouse models!

Just look at what you get for less than £1000!:

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WOW!

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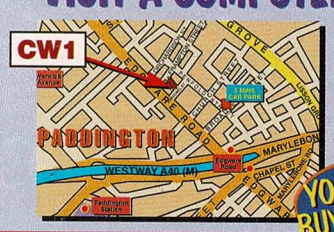

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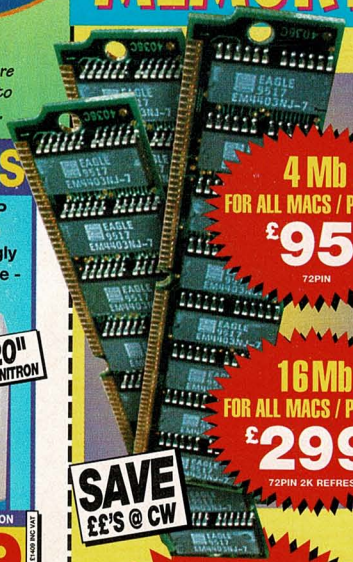

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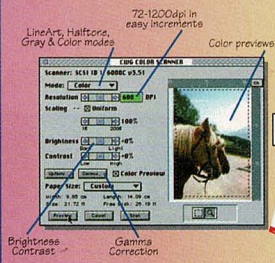

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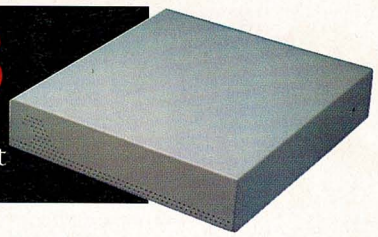

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W·A·V·E

MACFORMAT NEWS

New Macs are launched, and we've five pages of news from the Mac show of the summer. News Editor: Richard Hill.

New Performa has it all-in-one

Apple are offering a new Performa only a few months after the last models were launched (see MACFORMAT 25). After an enthusiastic reaction to their redesigned TV-style Performa 5200, they're adding an everything-but-the-kitchen-sink model with several new features.

As well as the quad-speed CD-ROM drive and TV tuner card featured in the top of the range 5200, the 5300 comes with an MPEG video card and a built-in modem. With the MPEG card, you can create video material of excellent quality and watch Video CDs – film and music videos on CD instead of tape. The TV tuner controls have been changed to take advantage of the new card, and *Avid Videoshop* software for video editing is included.

The modem enables you to get onto the Internet and has a transmission speed of 14,400 bits per second (bps). This is a decent speed, but you can expect later models to use faster 28,800 bps versions as their prices drop. *eWorld* software, which enables you to use Apple's exclusive on-line service as well as the Internet, is included. Using an Internet service will cost you extra, though.

The entire insides of the Mac have been revamped, with 16Mb of memory, a huge 1.2Gb (1,200Mb) hard drive and even a new main chip. The 603e is an improved version of the 5200's 603 chip and runs at an impressive 100MHz clock speed. Apple estimate the shop price of the Performa 5300 will be £2,429. For more details contact Apple on 0800 127753.

The Performa 5200 now has a new, improved cousin – the 5300 comes with enhanced video and a modem.

PowerPC PowerBooks at last

The long-awaited first PowerBooks to use PowerPC chips will go on sale over the next two months, giving you the fastest ever portable computers. And a new low-end PowerBook gives you portability for under £1,400.

All the models have been redesigned. The PowerBook 5300 range appears in September, offering six variations of memory size, hard drive size and type of screen – starting with 8Mb of RAM with a 500Mb hard drive for around £1,875. Among the new features are an infra-red network facility, so you can connect two PowerBooks together simply by pointing them at each other. An infra-red connection point for desktop Macs should become available soon.

The lightweight Duo 2300 (which will cost from £2,973) goes on sale in October. Like the desktop 5300s, it uses the PowerPC 603e chip.

The 190 range uses the same chip as the LCIII and Performa 630, the 68LC040, and comes with *ClarisWorks* already installed – prices start from £1,322. Both the 190 and the 5300 have new design features, including an expansion slot where you can clip in a floppy disk drive, buy a CD-like magneto-optical drive or even use the slot as a carrying tray for PC Cards, such as an expansion card system that offers extra modem or hard drive facilities. All the machines feature the trackpad cursor control that's gone down so well with 540 owners.

For more details on the new-look PowerBook range, contact Apple on 0800 127753.

New PowerBooks (from left): the 5300ce, the 190 and the Duo 2300c.

MACFORMAT ROCKETS UP

We're still number one! MACFORMAT's official circulation in the six months January to June 1995 averaged 47,122, according to the latest figures verified by the independent Audit Bureau of Circulations. That's an increase of a third in just one year. We'd like to thank you for your continued support – we couldn't be this big without you.

NEWS

EXPO

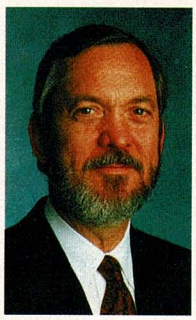
Apple's new look at Expo

The revitalised Apple led the pack at the recent Macworld Expo in Boston, with a flood of new ideas and new products. In the course of the four days of the show, an estimated 60,000 people came to the biggest Mac exhibition of the summer to see the latest PowerMacs and, for the first time, Mac-compatible computers from other companies.

For Apple, the Expo marked the biggest display yet of their new pragmatic approach, following an upstairs reshuffle earlier this year (see MACFORMAT 25). New Macs like the PowerMacs mentioned here have been designed specifically for different types of user – the 7500 for small businesses and the 8500 for media professionals, for example. Meanwhile, the Performa range continues to carve a niche in the home and education markets.

Apple's Brodie Keast said, 'We'll choose our customers and find products to suit them.' In the future, he added, Apple will often be seeking out partners who have products ideal for Apple's target audience, rather than trying to go it alone.

David Nagel, who heads Apple's research department, gave a crowd-pleasing opening speech, offering glimpses of new hardware and software. Copland, the codename for the next major Mac OS (operating system), was shown. Nagel later said that an early version, or beta, would probably be available to try out by this time next year.



Apple's David Nagel promises a 'new Mac OS by mid-1996'.

Also shown was *CyberDog*, an Internet utility that may revolutionise your use of the Net when it arrives (probably under a less interesting name). It uses OpenDoc, the Apple technology that enables you to create a document by bringing small programs, or parts, into the document as you need them. This means you'll be able to use Internet facilities within any document – for example, you could send out a multimedia brochure with a contact button that automatically connects you to the Net when you click on it.

The people's vote for best new program went to *Speed Doubler*, a companion to the popular *RAM Doubler*. Long queues for this self-explanatory utility were a constant feature of the Connectix stand. It includes programs to speed up file copying, improve your Mac's general performance and an emulator for PowerMacs. The emulator boosts the speed of the non-native programs written for older Macs when you use them on your PowerMac.

Look out for more details of the products covered here in future issues of MACFORMAT.

POWERMACS ARE FASTER

It's official. Tests by the firm Competitive Assessment Services show that the new PowerMacs have a healthy lead over the rival Pentium processors from Intel, used in many new PCs. Even the 7200 – Apple's slowest PowerMac in the current range – is 24% faster overall than equivalent Pentiums, while the 8500 is 44% faster.

Apple Power

Three exciting new PowerMacs made their debut at the Expo and are now on sale in the UK. All feature the new PCI (Peripheral Component Interconnect) expansion slots that offer you a range of cards to enhance your Mac, often at half the price that an existing NuBus card would cost.

Features of the PCI cards being offered by many firms already include improved graphics, video and networking. The power of PCI can be yours for as little as £1,240 – Apple's estimated price for the PowerMac 7200/75. Replacing the 7100 models, the 7200 has an innovative case design that enables you to install cards and memory in seconds. After sliding off the lid, you simply undo a couple of latches and flip over the cases holding the CD-ROM and floppy disk drives to reach the PCI slots and memory board waiting below.

Like the 7200, the 7500 uses the 601 chips found in the first PowerMacs, but running at faster speeds. What distinguishes it is its potential for upgrading. As faster central processor chips become available, you'll be able to just remove your old chip and insert the new one, boosting your Mac's power instantly at a fraction of the price you'd pay for a new machine.

The 8500 is also easily upgradable in this way, but its mighty 604 chip should keep you content for some time. This Mac is specially designed for demanding tasks like professional

Mac clones in the UK

DayStar's Genesis MP uses four PowerPC chips at once to become the most potent Mac ever.

Mac-compatible computers from Radius, which were showing at the Expo for the first time, are now on sale in Britain – the first non-Apple machines to reach these shores.

Based on the PowerMac 8100 series, the Radius 81/110 comes with no extras like the Radius video boards you might expect, so that you can choose your own set-up with your local dealer. Two versions are available – one with 16Mb of RAM and a 730Mb hard drive for around £3,408, and another with 16Mb of RAM and a 2Gb hard disk for about £3,995. Both use a PowerPC 601 running at 110MHz, a quad-speed CD-ROM drive and three NuBus expansion slots. For more details contact Radius on 01483 772773.

Meanwhile, DayStar unveiled their own Mac-compatible, the Genesis MP (multiple processor), which has the potential to be the most powerful of all the Mac options. Aimed at the lucrative video, publishing and animation markets, the Genesis costs a whopping $14,999 (about £9,400) and goes on sale in October. But there's no decision on UK distribution yet.

The Genesis uses four 604 chips running at 132MHz; you'll find only one of these chips in Apple's top of the range PowerMac 9500 (see MACFORMAT 27). It can edit huge *Photoshop* files three to five times faster than a PowerMac 8100/110, for example.

The Genesis uses a modified version of the Mac OS, but companies like Adobe and Strata have confirmed that their programs are being adjusted to work with this impressive setup.

flip their lids – new Macs

You'll soon be able to upgrade your PowerMac 7500 to the level of an 8500, simply by plugging in a new chip.

The PowerMac 7200 gives you the chance to exploit PCI for as little as £1,240.

The PowerMac 8500 has special video features, specifically for doing multimedia or TV work.

desktop publishing and multimedia creation, and comes with sockets to output your video work at near-broadcast quality. Both the 7500 and the 8500 have *Apple Media Conference* software, which enables you to communicate over a network, in an office for example, as though you were using a video phone. The cameras you'll need to take advantage of this are available for as little as £150.

The three models join the PowerMac 9500, a machine for the most demanding user, which was launched recently (see MACFORMAT 27). For more details on any of the new PowerMacs, contact Apple on 0800 127753.

NEW POWERMAC PRICES

Model/clock speed (MHz)	Chip	Memory/Hard disk	Price
7200/75	601	8Mb/500Mb	£1,240
7200/90	601	8Mb/500Mb	£1,586
7500/100	601	8Mb/500Mb	£2,144
7500/100	601	16Mb/1Gb	£2,701
8500/120	604	16Mb/2Gb	£4,147

All models come with three PCI expansion slots and a quad-speed CD-ROM drive, but a keyboard and monitor will cost extra. Clock speed comparison: the original PowerMac 6100 had a 601 chip running at 60MHz.

AND IT'S GOODBYE TO...

The first PowerMacs – the 6100, the 7100 and the 8100 – are now officially discontinued, which means there should be plenty of bargains around.

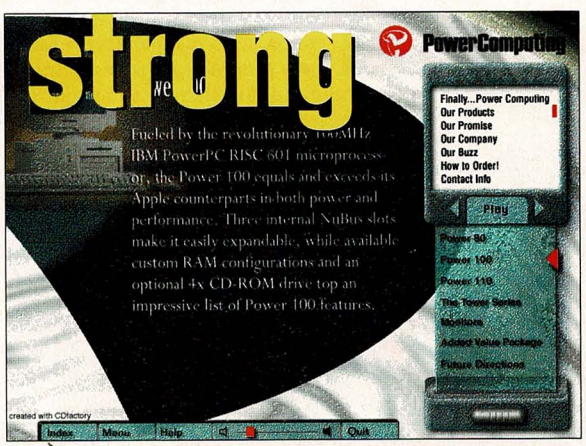
Power come on strong

In what must have been the most impressive Expo display ever from a company without a stand at the show, Power Computing made sure their name was everywhere throughout the four days of the Expo.

Power were the first company to license the Mac operating system to run on their own Mac-like computer. Over 30 stands from different firms had Power systems running, and everyone who attended the Expo was offered a CD-ROM featuring an interactive Power catalogue – plus a preview of *Marathon 2* to bring in the waverers.

No new Power machines were on display, but computers using the PCI slots are expected in September. When are the Power machines coming to the UK, then? Power's Mike Rosenfelt said that Power are busy sorting out localised versions of software to include with the machines; he believes they should have everything ready by the end of the year. They are also talking about making similar computers for Olivetti and Acorn, well known for excellent computers which are popular in schools but have failed to make an impact outside.

Power are also working on computers that will be able to use PCI cards alongside the older NuBus cards.



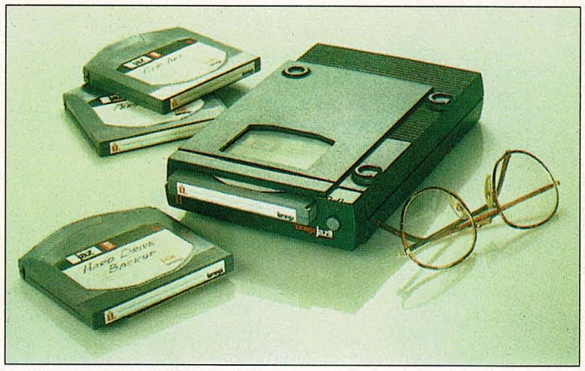
Everyone who went to the Expo had a chance to see Power's computer range on a CD-ROM.

And DayStar's multi-processor concept may soon be more accessible when Power launch low-cost machines that run more than one 601, in a move Rosenfelt called 'MP for the masses'.

NEWS

EXPO

The hard sell



The Jaz Drive gives you as much storage space as you want, at just $99 (£61) per Gigabyte.

Create photo-quality prints with this compact, high quality printer from Fargo.

The expanded GlidePoint range includes a keyboard with a built-in trackpad – throw that mouse away!

Intelligent monitors, cut-price data storage and novel printing devices – they were all at the Expo with a fascinating selection of hardware products.

The AppleVision 1710AV is a 17-inch monitor with ingenious software that automatically adjusts the screen's colour according to its surroundings. Where other monitors dim due to the aging of the material they're made with, the 1710AV display changes over time to compensate, and it works automatically with the Pantone system, popular with designers, who need to work with accurate colours.

The Jaz Drive is Iomega's follow-up to the Zip Drive, which has become an overnight hit (see our review of the Zip Drive on page 85). Due at the end of the year for $499, it uses $99 cartridges that can store 1Gb (1,000Mb) each – Iomega claim it's faster than some hard drives. But the Jaz cannot use your Zip disks – it's a completely different technology.

The current champions of data storage, SyQuest, are responding to Iomega's challenge with the EZ135 Drive. Set directly against the Zip, it offers $20 cartridges that can store 135Mb each using a $200 drive.

The Casio QV-10 is a camera that stores pictures as computer files. You can keep up to 96 pictures you've taken on the camera before viewing them on your TV or copying them across to your Mac with the software provided with it.

FotoFUN! is a mini-printer from Fargo that uses advanced dye sublimation to create beautiful photo-quality postcard-size images for $400. There's also a separate kit you can use to print onto mugs – FotoMUG! of course.

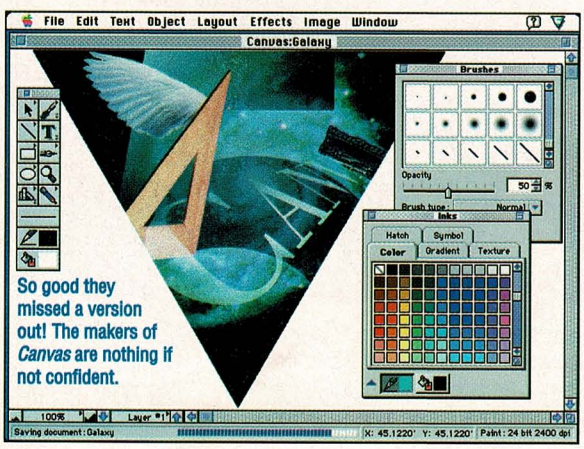
The GlidePoint – a fingertip control device you can use instead of a mouse, mentioned in MACFORMAT 26 – now has several variations, including a larger version and one that's incorporated into a full-size keyboard.

BIG SPENDERS

Boston's tourist board reckon visitors to the Expo spent over $65 million (£40.6 million) while they were visiting the city. Not bad for a four-day event.

Graphics get ready for '96

It was a quiet Expo for one of the Mac's traditional strongholds, with comparatively few new graphics programs being announced. But there was a major surprise hidden away in one corner.



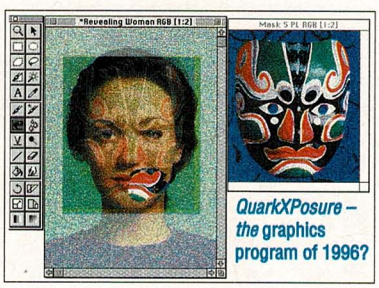
So good they missed a version out! The makers of *Canvas* are nothing if not confident.

Sitting in a corner of Apple's giant stand was an early version of *QuarkXPosure*, the new *Photoshop* rival from the makers of the DTP champion *QuarkXPress*. With powerful image editing features and close ties with *XPress*, it's due out early in 1996.

Live Picture 2.0 was perhaps the most spectacular of the art software, offering powerful editing functions at a third of the price of its previous version. Deneba Software previewed a major upgrade of their *Canvas* drawing program, adding image editing and desktop publishing features. They say the revamp is so big that it's moving from version 3.5 to 5.0, skipping version 4 altogether! And *Chagall* is a low-cost image program suitable even for older Macs like LCs – it runs fine on a 4Mb system.

Bride Of Frankenstein © 1994 Gerald Bybee

Live Picture 2.0 offers advanced distortion tools, which you can use to create stunning effects.



QuarkXPosure – *the* graphics program of 1996?

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EXPO

QUICKTIME ON THE NET

Apple's QuickTime video system and QuickTime VR virtual reality system are to be incorporated into *Netscape Navigator*, the top World Wide Web browser. So it will soon be easier than ever to use video on the Net – look out for more details soon.

Net is now easier to use

As more people join the Internet community – especially people new to computing, never mind the Net – programs with the ease of use you expect from the Mac are finally emerging. The programs you always thought should exist now do.

Drawing constant crowds, after a dream introduction in David Nagel's welcome speech, was *PageMill*, a program that applies the simple concepts of desktop publishing to the arcane science of writing World Wide Web pages. Creating material for the Net's electronic news stand requires knowledge of HTML (HyperText Mark-up Language), a language specifically used for this purpose. For $195, *PageMill* does the hard work – you just style your material up as you would a word processor document. You can insert and adjust graphics and links automatically, and much more.

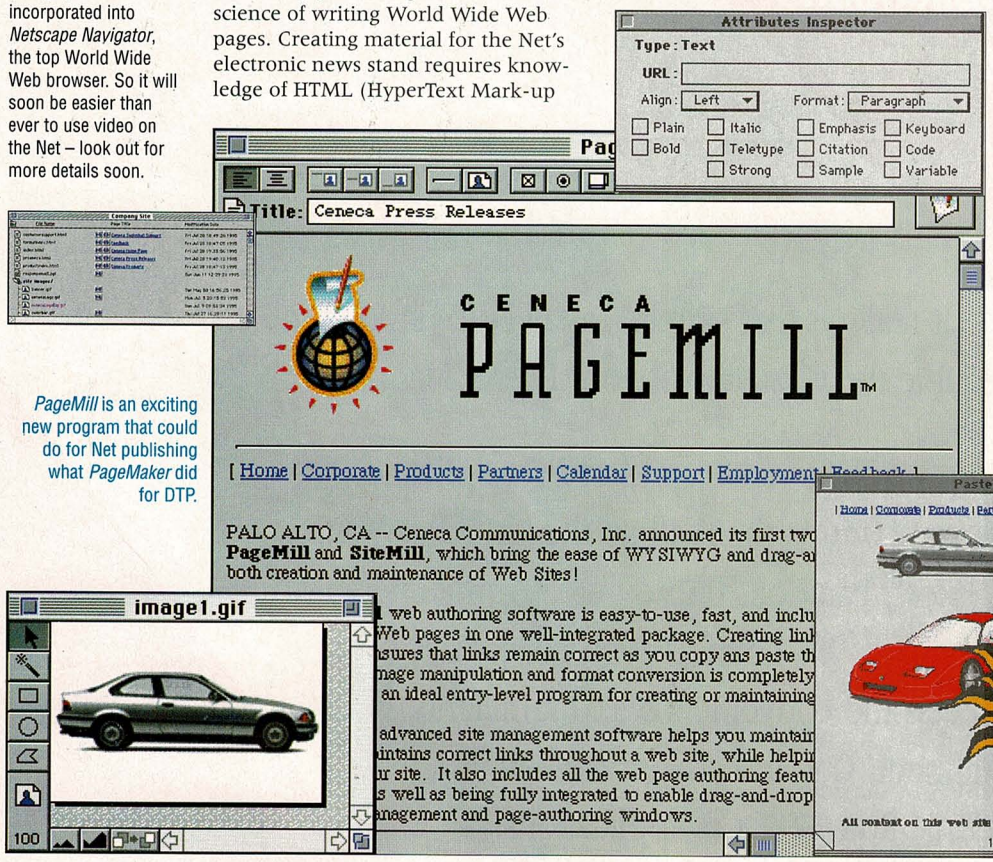
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image1.gif
100
Pasteboard

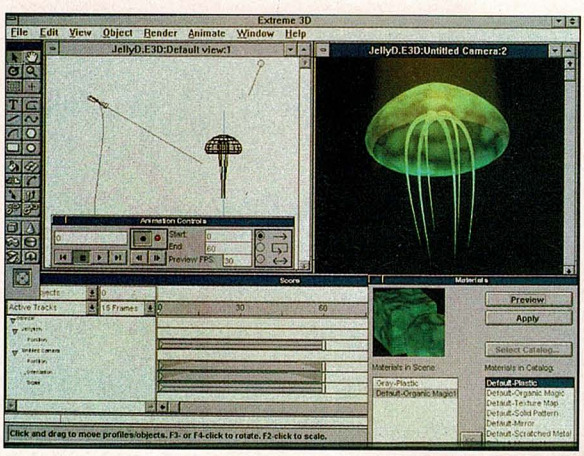
PageMill is an exciting new program that could do for Net publishing what *PageMaker* did for DTP.

Taking the 'eeeee' out of e-mail are *Claris Emailer* and *MailKeeper* from Nisus, two programs that help you sort out your mail and keep address books for your regular contacts.

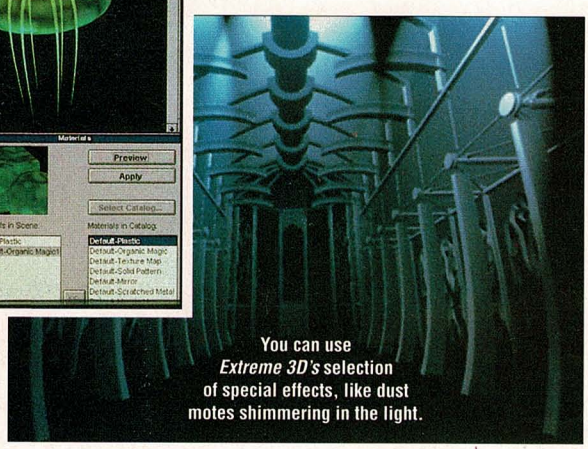
The Apple Internet Connection Kit takes popular Net programs and offers them in one box. The *Netscape Navigator* Web browser, a Lite version of *Emailer* and newsgroup software are included (look out for an introduction to newsgroups in MACFORMAT soon). And the Connection Kit's *Apple Internet Dialer* gives you direct access to the service providers you need to get onto the Net, making the whole process easier. Expect the Connection Kit in the UK once Apple has arranged link-ups with local Internet service providers.

Easy 3D arrives

You can create impressive images with the Mac's selection of 3D programs, but unless you're a skilled designer, using many of them takes some getting used to. But a couple of new developments mean you will soon no longer have to fear 3D.



Extreme 3D will offer a full range of 3D drawing and animation tools that are simple to use.



You can use *Extreme 3D's* selection of special effects, like dust motes shimmering in the light.

Macromedia have launched *Extreme 3D*, a program they believe redefines this area of software. Due out here in October for £620, *Extreme 3D* offers simple, flexible tools you can use to create complex models, add detailed textures to their surfaces and animate them. New design features include the ability to link objects together for animation, so that as you move one item frame by frame, the surrounding items react and adjust automatically. There are all sorts of effects you can add.

There were also early glimpses of QuickDraw 3D, the Apple technology that should become an industry standard for 3D. This will mean you'll be able to use the same type of file in many different programs, just as you can with images today – and creating complex 3D models and images will be much quicker. Strata and Specular announced that forthcoming versions of their respective *StudioPro* and *Infini-D* programs will support the format.

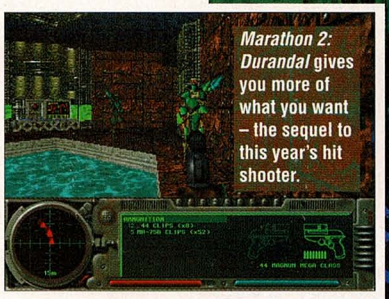
Mac games keep coming

As the Mac's biggest ever year for games continued, yet more titles were announced and previewed at the Expo, including a sequel to the biggest smash of recent months.

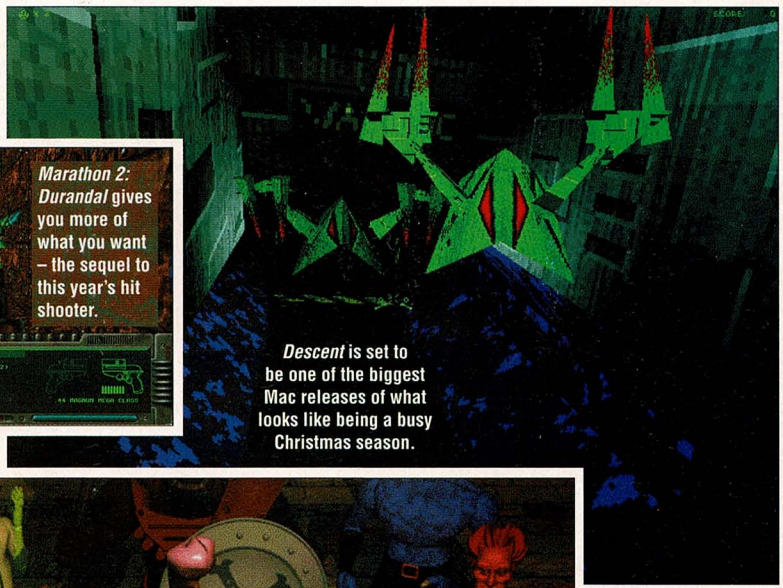
Marathon 2 is coming. Every Expo attendee was offered an exclusive CD-ROM preview of *Durundal*, which offers new twists on *Marathon's Doom*-like 3D action style. But makers Bungie haven't set a release date yet, so you (and MACFORMAT) will have to be patient.

Interplay consolidated their position as the Mac's biggest supporter for games with several new titles on the way. There was a chance to play *Dungeon Master 2* and *Frankenstein: Through the Eyes of the Monster*. But the hot tip for Christmas is *Descent*, a frenetic 3D flight game whisking you through winding passages. And a QuickDraw 3D version is in the works.

Other titles include *Dust* from CyberFlix – 'a tale of the Wired West'; *IndyCar Racing* from Virgin; a racing simulation that's real right down to the screech marks; *Absolute Zero* from Domark, an action-packed space saga; and *Zeddas: Servant of Sheol* and *Yellow Brick Road* from Synergy. Oh, and something called *Doom 2*. Look out for more on all these titles soon.



Marathon 2: Durandal gives you more of what you want – the sequel to this year's hit shooter.



Descent is set to be one of the biggest Mac releases of what looks like being a busy Christmas season.

Zeddas from Synergy is a moody role-playing saga starring a gallery of grotesqueries.

HP ERROR

Our apologies to readers and Hewlett-Packard alike. In the portable printers feature on page 63 of MACFORMAT 27 we gave you the incorrect telephone number for HP. The customer information telephone number is: 01344 369222.

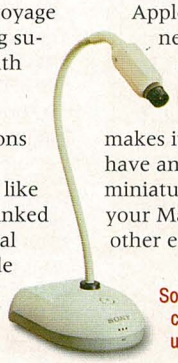
Multimedia thrives

Although new multimedia titles were a little thin on the ground at Expo, programs that enable you to create your own are sprouting up. And communicating directly through video is finally becoming more than a fanciful dream.

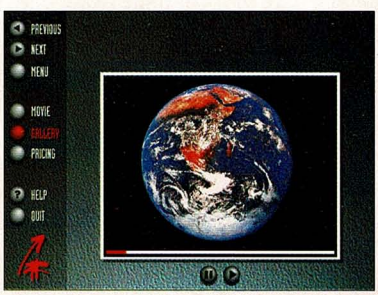
The pick of the new titles was *Passage to Vietnam*, a CD-ROM voyage through the troubled land using superb photography and video with understated presentation.

Special Delivery aims to make creating multimedia presentations as easy as possible with a slideshow-based design. Effects like video and control buttons are linked together using a simple graphical system. Music specialists Opcode use timelines – as used in video editing programs like *Premiere* – to make multimedia in *MAX 3.0*. But the multimedia you create could be a presentation or even a virtual mixing desk to help you control lighting and sound, perhaps in a club. Quark are also planning a multimedia system to work with *QuarkXPress* for release sometime in 1996.

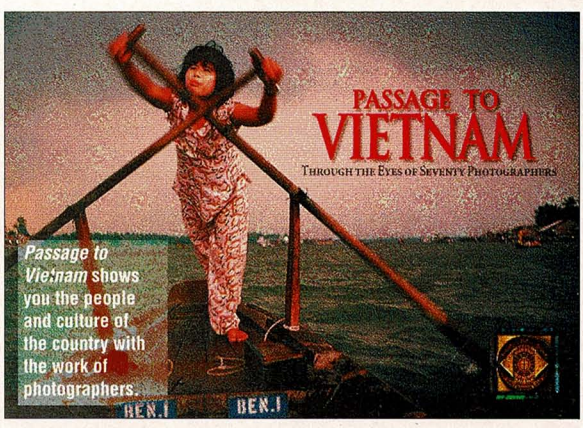
QuickTime Video Conferencing, the video phone system developed by Apple, is included with some of the new PowerMacs. But anyone can use it with Connectix's *VideoPhone*, a program that uses the same technology and makes it widely available. And Sony have announced the PC Cam, a $499 miniature camera you can hook up to your Mac so that the person on the other end of the line can see you.



Sony's PC Cam is a full-colour video camera you can use to talk to other Mac users on your network.



With *Special Delivery*, you can create sophisticated multimedia productions without programming knowledge.



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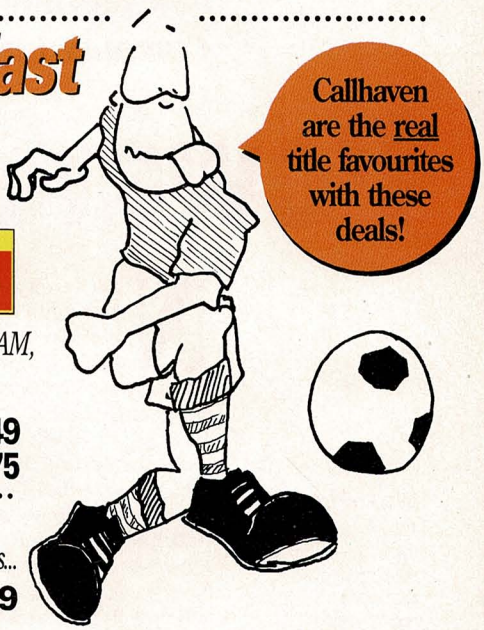

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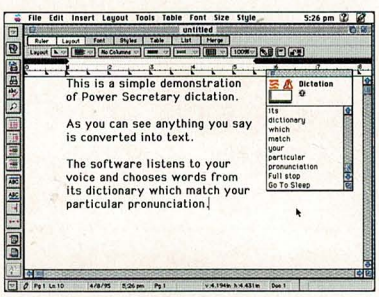
WHAT'S NEW

A voice recognition system that does your typing for you, and a new method for scanning text into any document. Plus: *Wing Commander* meets *Peter Rabbit.* Compiled by Richard Hill.

PowerSecretary 2.0

Now here's an idea. Suppose you could throw away your keyboard and control your Mac with your voice, then load up your favourite word processor and create a letter simply by speaking it? While this sort of thing is normal in the future world of *Star Trek,* it's proved difficult for 20th century scientists to get it working.

But *PowerSecretary* is different. American firm Articulate Systems have finished ironing out the bugs, and now have a working program. You simply don a microphone headset, and spend an hour reciting a set list of words, enabling the program to get to grips with your pronunciation. You're then ready to start dictating, and the more you use the program, the better it understands your phrasing. Eventually you're speaking just a little slower than usual – as if you had a. full. stop. after. each. word. The voice recognition system is even advanced enough to filter out background noise that could turn your poetic turn of phrase into so much tudsfb phgfa.



Working in *WordPerfect* here, *PowerSecretary* enables you to dictate text to your Mac.

How much use you can make of the program's voice recognition depends on which version you get. At the bottom of the ladder is the £1,050 *PowerSecretary WP,* which enables you to dictate straight into the *WordPerfect* word processor. But it's the £1,755 *PowerSecretary Power* that unleashes the potential of the program. It uses AppleScript technology, so you can set up your Mac to obey spoken commands – print a document or open a program. You can enter text into almost any program, and you can also use simple commands to correct or replace words in your text. The program's vocabulary can reach 120,000 words, but there's an extra dictionary for medical workers, full of the technical terms used in doctors' reports.

The catch is that you need a hefty Mac – preferably a PowerMac with 24Mb of RAM. So is it actually cheaper than employing someone to do your typing? Distributors Voiceworks claim *PowerSecretary* will enable you to enter text at up to 55 words a minute.

■ Price: from £1,050. ■ Out: *WP* – now; *Power* – September.
■ Requires: Quadra or better with System 7.5, at least 20Mb of RAM and 25Mb of hard disk space. Microphone headset included.
■ For more details contact Voiceworks on 0181 455 4750.

WORDPERFECT

WordPerfect 3.5 is the latest version of the popular word processor. It's available now on disk or CD-ROM for around £145. Look out for more details next issue or contact Novell on 01344 724000.

MACDIARY

MACFORMAT's guide to what's happening in the world of Macintosh.

■ Circuit
Where: Royal College of Art, Kensington, in London.
When: Saturday 2 September to Friday 8 September.
What: The Royal College of Art's 1995 Interactive Multimedia Degree Show. MA students from all over Europe display their projects, including *The Plant Game,* an education program, and the interactive soap opera *Persil Place.*
Price: free.
Contact: The Royal College of Art on 0171 584 5020.

■ Live '95
Where: Earls Court, London.
When: Tuesday 19 September to Sunday 24 September.
What: a consumer electronics showcase, featuring the latest in computers, hi-fi, telecommunications, home cinema and more. Apple will be showing their new Performas and giving presentations of the latest Mac technology.
Price: adults £8, children aged 15 and under £4.
Contact: First Call on 0171 396 4545 or you can get a ticket from any London Underground station.

■ Apple Expo '95
Where: the Grand Hall, Olympia, London.
When: Wednesday 8 November to Saturday 11 November.
What: Britain's biggest Mac show of the year. Exhibitors should include all the big Mac companies, including Apple themselves, showing the latest hardware and software. There are traditionally show bargains from retailers, and also a huge selection of seminars and workshops, while the Pre-Press Forum will be showing how the Mac is fully involved in the publishing process.
Price: free if you call for a ticket by Friday 27 October, or £10 on the door.
Contact: the Apple Expo Hotline on 0181 984 7711.

■ Computer Graphics Expo '95
Where: Wembley Conference and Exhibition Centre, London.
When: Tuesday 28 November to Thursday 30 November.
What: graphics show, conferences and animation festival under the same roof. Exhibitors include Avid, Alias, Softline and Elastic Reality. Plus, the Interactive Entertainment Development Forum; the Broadcast Design Association Conference; the Computer Art & Design Contest; the London Effects & Animation Festival and much more.
Price: free if you register by Friday 3 November, or tickets will be available for £10 on the door.
Contact: Digital Media on 0181 995 3632.

NEW FOR THE MAC

Wing Commander 3

After the success of *Super Wing Commander*, Electronic Arts are releasing a sequel at the end of September. Rather than releasing *Wing Commander 2*, which has been a hit on other computer platforms, EA are going with *Wing Commander 3: The Heart of the Tiger* – an ambitious attempt at an interactive movie.

You spend the game shooting your enemies, with the likes of Mark Hamill and Malcolm MacDowell appearing in a series of scenes that provide the plot. And *Wing Commander 4* is already in the works – look out for it next year. For more details contact Electronic Arts on 01753 549442.

Hollywood meets shoot-'em-up action in *Wing Commander 3*, the latest in the series.

Beatrix Potter on CD

Unlikely as it sounds, the works of traditional children's favourite Beatrix Potter are coming out on the most modern technology of all. *The Adventures of Peter Rabbit and Benjamin Bunny* CD-ROM converts the familiar watercolour illustrations used in the stories into Mac animation and QuickTime video.

Peter Rabbit and Benjamin Bunny is intended to help young children learn to read, but it includes lots of other things for them to do – including simple games and even gardening with Mr McGregor. And your friend the robin is never far away to lend a hand. Expect a price of around £40 when *The Adventures of Peter Rabbit* comes out this autumn. For more details, contact Mindscape on 01444 246333.

Klik & Play

The Mac games scene is stronger than ever – but perhaps you think you can do better. Now you can make your own hit game using *Klik & Play*, a games creator.

You don't need any programming knowledge to get a game up and running using *Klik & Play*. You can assemble a simple platform game using the graphics and sounds supplied, for example, or you might choose to embark on a more ambitious project using your own designs and sounds. It's up to you how original, creative and involved you want to get.

Sample games are included, which you can play to get more ideas. And when your *Marathon*-beater is complete, you can save it as a standalone program – so any Mac owner can play it.

Klik & Play is released in September for £44.99 on disk or £49.99 on CD-ROM, which offers you more predesigned graphics and sound. So we'll be expecting your first games for our CD-ROM in October, okay? For more details, contact Europress on 01625 859333.

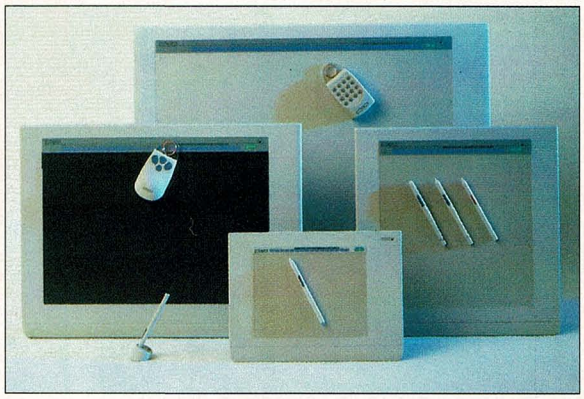
Wacom tablets

Just missing our round-up of graphics tablets last issue was the new UltraPad range from Wacom – plus the ArtPad II, the smallest of all their pads.

You can use a tablet to draw directly into your Mac graphics program, which makes Mac design or illustration work feel more like drawing on paper. The UltraPads have drawing areas ranging from A5 (about eight by six inches), ideal for quick and easy everyday design work, right up to A2 (23.5 by 16.5 inches) – aimed at people working in industries like architecture or engineering. The prices of models in the range have been greatly reduced – with the UltraPad A4 costing around £540, compared to its £700 predecessor. The UltraPad A5 now costs around £387.

With the UltraPad A4 or larger model you have two options for the type of cordless pen you'd like. The UltraPen Eraser (supplied with the A5 and ArtPad as standard) has a soft second tip, and can be used for erasing details of your work. The UltraPoint Ergonomic is designed to relieve stress on the hand during intensive use.

Meanwhile, the ArtPad II has a drawing area of five by four inches, and is ideal if you're looking for a low-cost drawing option for the home or in education, or even if you just want an alternative to using your mouse. Like the UltraPad, it's pressure sensitive, which means that the thickness of the line you draw on screen increases as you press harder, giving a more natural effect.



The UltraPad offers a variety of drawing and design options for anyone from home users to design pros.

■ Price: ArtPad II, under £200; UltraPad, from £387. ■ Out: now. ■ For more details contact Computers Unlimited on 0181 200 8282.

OOPS

In last month's graphics tablets round-up we stated in the table on page 92 that the Wacom UD-1212MK uses a puck with a cord. It is, in fact, cordless.

IRIS DataPen

An inventive new use of scanning technology has emerged in the form of the IRIS DataPen. It's specially designed for work involving OCR (Optical Character Recognition) – the process of converting printed text from books or magazines into digital text on your Mac.

As the name implies, it's pen-shaped, meaning that you can hold it and sweep it along a line of text as you might do with a barcode reader in a supermarket. The DataPen converts the scanned text into keyboard commands, so you can use it to enter text into any program that has a text cursor on screen. You can enter type into a word processor, tables of figures into a spreadsheet or a complex address into your Web browser.

Belgian firm IRIS reckon the DataPen can cope with scanning 100 characters a second, and the software includes options for learning unusual characters or replacing one with another (you could set it to ignore '£' symbols when you're entering numbers, for example).

The DataPen only works with Macs that have a slot for NuBus cards (which limits it to most Mac II and Quadra variations), but a version that fits into the ADB socket (where you plug in your mouse) will soon be available, which will make it more widely accessible.

■ Price: £469. ■ Out: now. ■ Requires: any Mac with System 7, 8Mb of RAM and a NuBus slot. ■ For more details contact Image Data Systems on 0171 336 7942.

NEW LOWER PRICES...

68040 MACS

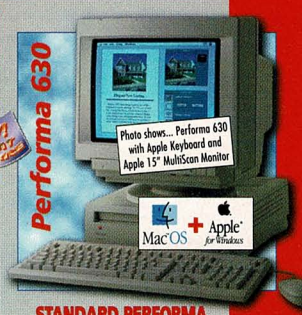
PERFORMA 630 CPU WITH DISPLAY & KEYBOARD OPTIONS + GH SOFTWARE

PERFORMA 630s FROM...

£599 (£703.83 inc. VAT)

ALL GH Performa 630 Bundles are supplied with... System Software, At Ease, PC Exchange, Claris Works 2.1, Mavis Beacon Teaches Typing, Spectre Supreme, Click Art Performa, MacGallery Clip Art, Manuals, Mouse, all Connecting Cables etc and options for Apple 14" or 15" Colour Monitors and Apple Design Keyboard etc.

NEW... IBM PC Compatible 630 includes a 486 DOS Card operating at 66MHz and DOS 6.2 Software. (Windows available separately).



STANDARD PERFORMA 630 SYSTEMS & SOFTWARE

Superfast 66/33MHz 68LC040 CPU's! Some feature built in 'Video in TV Tuner' which can input video from VCR's etc. and cut & paste between the two, plus... you can also watch TV in a window on your Mac screen. And... there's even an IBM PC Compatible Model too!

RAM	HD	Built-In	Monitor	CD	Keyboard	Sys	Price
4Mb	500Mb	✗	✗	✗	✗	7.5	£599 (£704)
4Mb	500Mb	✗	14" Performa Plus	✗	✓	7.5	£879 (£1033)
4Mb	500Mb	✗	15" MultiScan	✗	✓	7.5	£969 (£1139)
8Mb	500Mb	✗	15" MultiScan	✓	✓	7.5	£1049 (£1233)
8Mb	350Mb	TV	15" MultiScan	✓	✓	7.5	£1199 (£1409)
12Mb	500Mb	DOS	15" MultiScan	✓	✓	7.5	£1549 (£1820)

FREE MODEM OFFER!

FOR A LIMITED TIME, GH WILL GIVE YOU A FREE GLOBAL VILLAGE TELEPORT GOLD MODEM & 'E' WORLD SOFTWARE WITH 8/500-CD PERFORMA 630 STANDARD SYSTEMS LISTED ABOVE! HURRY THESE VOUCHERS ONLY AVAILABLE WHILE STOCKS LAST!

PERFORMA 630 'PLUS' MULTIMEDIA BUNDLE

GH Performa 630 'PLUS' Bundles below are ADDITIONALLY...

FREE MULTIMEDIA SOFTWARE

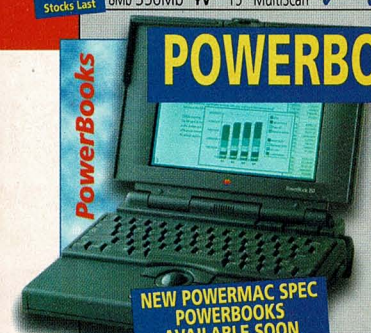
SUPPLIED WITH... Tutorials, Mavis Beacon Teaches Typing, Spectre Supreme (Game), Click Art Performa, MacGallery Clip Art Treasure Pack PLUS... GROLIER MULTIMEDIA ENCYCLOPAEDIA, 1994 GUINNESS DISK OF RECORDS, MICROSOFT DINOSAURS, ROSETTA STONE POWER PACK, THE SAN DIEGO ZOO PRESENTS THE ANIMALS, BEATRIX POTTER'S THE TALE OF BENJAMIN BUNNY and LEONARDO THE INVENTOR ...on ALL CD ROM!!!

PERFORMA 630 PLUS SYSTEMS...

RAM	HD	Built-In	Monitor	CD	Keyboard	Sys	Price
8Mb	500Mb	✗	15" MultiScan	✓	✓	7.5	£1079 (£1268)
8Mb	350Mb	TV	15" MultiScan	✓	✓	7.5	£1249 (£1468)

While Stocks Last

POWERBOOKS



NEW POWERMAC SPEC POWERBOOKS AVAILABLE SOON Phone GH for details

Gordon Star Buy Warranty

POWERBOOK 150 4/250 PLUS CLARIS WORKS 2.1 SOFTWARE

PORTABLE SAVINGS

£749 (£880.08 inc. VAT)

POWERBOOK PORTABLE MACS

150 - 4/250 + Claris Works 2.1	£749	(£880)
520 - 4/240 + Mobility Pack	£1199	(£1409)
520c - 4/240 + Mobility Pack	£1699	(£1996)
520c - 12/320 + Mobility Pack & Modem	£2249	(£2643)
520c - 12/320 + Modem + GSM Bundle	£3195	(£3754)
540c - 4/320 + Mobility Pack	£2699	(£3171)
540c - 12/500 + Mobility Pack & Modem	£3049	(£3583)
540c - 12/500 + Mobility Pack & GSM	£4049	(£4758)
280c - 4/500 + Mobility Pack	£2099	(£2466)
280c - 12/500 + Mobility Pack & Modem	£2449	(£2878)

FREE... APPLE VOUCHER with all PowerBook 540c and 280c giving FREE upgrade to Powermac Specification (From around September '95)

NEW... PCMCIA/GSM Mobile Phone Interface for POWERBOOK 500 Series - SOME PACKS EVEN INCLUDE MOBILE PHONES!! CALL GH NOW FOR DETAILS!

POWERBOOK ACCESSORIES & SOFTWARE

150/Duo 230 - 4Mb RAM Upgrade	£166	(£195)
140/45,150,160/65,170,180c - Battery	£43	(£50)
500 - 4Mb RAM Upgrade	£171	(£200)
500 - Express Modem	£325	(£381)
500 - PCMCIA Expansion	£113	(£132)
500 - Type III Intelligent Battery	£90	(£106)
Duo - Dock Plus inc. 230HD & VRAM	£622	(£730)
Duo - External 1.44 Mb Floppy Drive	£94	(£110)
Duo - Floppy Drive Adaptor	£81	(£95)
Duo - Deluxe Leather Carry Bag	£120	(£140)
Duo - Type III Rechargeable Battery	£77	(£90)
Powerbook (non Duo) - Security Kit	£26	(£30)
All Powerbooks - Norton Essentials	£81	(£95)
GSM Mobile FAX Pack for 500 Series Powerbooks	£1225	(£1439)

Apple Authorised Reseller & Service Provider

IT'S BACK!

GH DEFERRED PAYMENTS FOR PERSONAL CALLERS...

10% DEPOSIT

THEN PAY NOTHING UNTIL 1996!*

see details below

FREE GH SOFTWARE BUNDLES WITH ALL MAC PERFORMA 'PLUS' PACKS (see panels left and right)

Look around for the PERFORMA 'PLUS' bundles on this advert and see just how much you get from GH FREE!

Photo shows... FREE SOFTWARE included with PERFORMA 'PLUS' COMPUTERS on these pages. NB. Titles are pre-installed & ready to use and are NOT packaged as displayed here. CD Disks ARE included with Multimedia Bundles.

HOME OFFICE BUNDLE...

HOME PUBLISHER (DTP), TOUCHBASE and DATEBOOK! WITH ALL GH MACS WHERE YOU SEE THIS LOGO...

WORTH over £500 purchased separately!

MULTIMEDIA BUNDLE...

GROLIER MULTIMEDIA ENCYCLOPAEDIA, MICROSOFT DINOSAURS,THE SAN DIEGO ZOO PRESENTS THE ANIMALS, 1994 GUINNESS DISK OF RECORDS, ROSETTA STONE POWER PACK, BEATRIX POTTER'S THE TALE OF BENJAMIN BUNNY & LEONARDO THE INVENTOR... CD ROMS WITH ALL GH MACS WHERE YOU SEE THIS LOGO... Plus... GH ALSO GIVE YOU CLARIS ORGANISER WITH ALL PERFORMA 5200 AND 6200 POWERMACS TOO!

WORTH over £700 purchased separately!

PLUS... With each of the above software bundles you'll also get System Software, PC Exchange, At Ease, Tutorials and Claris Works 2.1 OR 3.0, Mavis Beacon Teaches Typing, Spectre Supreme, Click Art Performa AND MacGallery Clip Art Treasure Pack

WYSIWYG...

WITH ALL OUR OFFERS - AND WHAT YOU NEED! WE CLEARLY SHOW WHAT IS INCLUDED AND PACKS ARE NOT STRIPPED DOWN TO GIVE ATTRACTIVE HEADLINE PRICES.

GH THE 'CLEAREST CHOICE' FOR YOUR NEXT APPLE!

PHONE AND ASK FOR DETAILS OF BOTH GH's FLEXIBLE BUDGET PLAN* (for personal callers to our showroom) & APPLE COMMERCIAL CREDIT/LEASE SCHEMES FOR BUSINESS USERS. Subject to status. Written details available on request. GH ARE HAPPY TO CONSIDER A TRADE-IN WHEN YOU WISH TO UPGRADE YOUR APPLE MAC. ON A TIGHT BUDGET? - WHY NOT ASK ABOUT OUR GUARANTEED SECOND USER BARGAINS!

THE PRICES...

ALTHOUGH GH PRICES ARE THE KEENEST AROUND, WE DO HAVE SPECIAL OFFERS AT SUCH SHORT NOTICE THAT WE ARE UNABLE TO PUBLICISE THEM HERE. THE ONLY WAY TO TAKE ADVANTAGE OF THESE DEALS IS TO KNOW ABOUT THEM... AND THE ONLY WAY TO BE IN THE KNOW IS TO PHONE GH FOR DETAILS CHECK THE LATEST NEWS AND GET...

THE SPECIAL DEALS!

NEW LOWER PRICES...

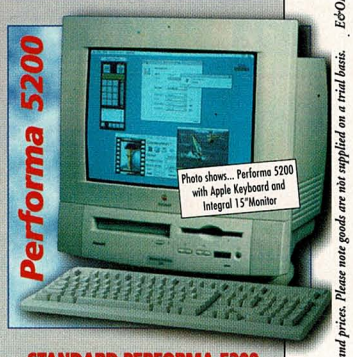
POWERMACS

PERFORMA 5200 8/500 CD600i, 15" FST DISPLAY, KEYBOARD OPTION + GH SOFTWARE

PERFORMA 5200s START AT JUST...

£1219 (£1432.33 inc. VAT)

All our Performa 6200's are supplied with... System 7.5.1 Software, At Ease, PC Exchange, NEW Claris Works 3.0, Claris Works 3.0, Mavis Beacon Teaches Typing, Spectre Supreme, Click Art Performa, MacGallery Clip Art, Manuals, Mouse, Connecting Cables, Keyboard option etc. REMEMBER THE GH BUNDLES WHEN COMPARING PRICES TO OTHER DEALS ON OFFER!



STANDARD PERFORMA 5200 SYSTEM & SOFTWARE

A unique ALL-IN-ONE PowerMac System that incorporates a PowerPC 603 CPU, CD600i Drive, 15" MultiScan FST Colour Display, Stereo Speakers, 500 Mb Hard Drive, Built-In Microphone and Infra Red Remote Control (TV versions) - ALL IN ONE! Includes... Mouse, Connecting Cables, Manuals & Apple Design Keyboard option

RAM	HD	MONITOR	CD	Keyboard	Sys	Price
8Mb	500Mb	15"MS Integral FST	✓	✗	7.5.1	£1219 (£1432)
8Mb	500Mb	15"MS Integral FST	✓	✓	7.5.1	£1299 (£1526)

PERFORMA 5200 'PLUS' MULTIMEDIA BUNDLE

GH Performa 5200 'PLUS' Bundles below INCLUDE ALL the software detailed above and then some. GH offer you EXTRA VALUE with the addition of some great software on CD. Both 'PLUS' Packs incorporate the latest Quad Speed CD ROM Drives and the higher spec unit also boasts built-in TV with full infra red remote control of Start Up, Shut Down, TV and CD Functions. Infra red can be used with other 5200s when a TV upgrade kit is added.

FREE MULTIMEDIA SOFTWARE

SUPPLIED WITH... Tutorials, Mavis Beacon Teaches Typing, Spectre Supreme (Game), Click Art Performa, MacGallery Clip Art Treasure Pack PLUS... GROLIER MULTIMEDIA ENCYCLOPAEDIA, 1994 GUINNESS DISK OF RECORDS, MICROSOFT DINOSAURS, ROSETTA STONE POWER PACK, THE SAN DIEGO ZOO PRESENTS THE ANIMALS, BEATRIX POTTER'S THE TALE OF BENJAMIN BUNNY and LEONARDO THE INVENTOR ...on ALL CD ROM!!! AND... CLARIS ORGANISER 1.0 Vers. 2

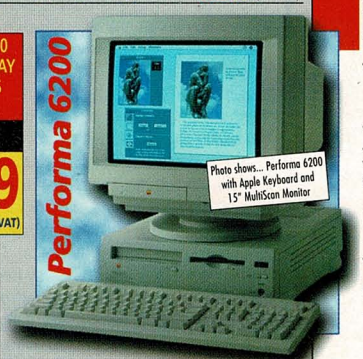
RAM	HD	MONITOR	CD	TV	Keyboard	Sys	Price
8Mb	500Mb	15" MS Integral FST	✓	✗	✓	7.5.1	£1349 (£1585)
12Mb	500Mb	15" MS Integral FST	✓	✓	✓	7.5.1	£1549 (£1820)

PERFORMA 6200 8/500 CPU WITH CD600i, DISPLAY & KEYBOARD OPTIONS + GH SOFTWARE

6200s FROM...

New Product **£989** (£1162.08 inc. VAT)

All our Performa 6200's are supplied with... System 7.5.1 Software, At Ease, PC Exchange, NEW Claris Works 3.0, Mavis Beacon Teaches Typing, Spectre Supreme, Click Art Performa, MacGallery Clip Art, Manuals, Mouse, Connecting Cables etc and, Monitor & Keyboard options and, just like 5200s, FEATURE... the NEW PowerPC 603 CPU for A REAL BOOST IN speed! REMEMBER THE GH BUNDLE WHEN COMPARING PRICES TO OTHER DEALS ON OFFER!



STANDARD PERFORMA 6200 SYSTEMS & SOFTWARE

All GH 5200s incorporate, CD600i Drive, 500 Mb Hard Drive, Built-In Speakers (some packs include Stereo Apple Design Speakers), Infra Red Remote Control (TV versions), Mouse, Cables, and Manuals plus Apple Design Keyboard option.

RAM	HD	MONITOR	CD	TV	Keyboard	Sys	Price
8Mb	500Mb	NONE	✓	✗	✗	7.5.1	£989 (£1162)
8Mb	500Mb	NONE	✓	✗	✓	7.5.1	£1059 (£1244)
8Mb	500Mb	14" Performa Plus	✓	✗	✓	7.5.1	£1249 (£1468)
8Mb	500Mb	15" MultiScan	✓	✗	✓	7.5.1	£1339 (£1573)

PERFORMA 6200 'PLUS' MULTIMEDIA BUNDLE

When you buy a GH 6200 'PLUS' Multimedia you are also...

FREE MULTIMEDIA SOFTWARE

SUPPLIED WITH... Tutorials, Mavis Beacon Teaches Typing, Spectre Supreme (Game), Click Art Performa, MacGallery Clip Art Treasure Pack PLUS... GROLIER MULTIMEDIA ENCYCLOPAEDIA, 1994 GUINNESS DISK OF RECORDS, MICROSOFT DINOSAURS, ROSETTA STONE POWER PACK, THE SAN DIEGO ZOO PRESENTS THE ANIMALS, BEATRIX POTTER'S THE TALE OF BENJAMIN BUNNY and LEONARDO THE INVENTOR ...on ALL CD ROM!!! AND... CLARIS ORGANISER 1.0 Vers. 2

PERFORMA 6200 SYSTEMS...

RAM	HD	CD	TV	Monitor	DesSpeakers	Sys	Price
8Mb	500Mb	✓	✗	14"Trinitron	✓	7.5.1	£1349 (£1585)
8Mb	500Mb	✓	✗	15" MultiScan	✗	7.5.1	£1389 (£1632)
12Mb	500Mb	✓	✓	14"Trinitron	✓	7.5.1	£1549 (£1820)
12Mb	500Mb	✓	✓	15" MultiScan	✗	7.5.1	£1599 (£1879)

All listed prices are what YOU PAY, and there are NO HIDDEN EXTRAS. Prices are correct at time of going to press (Pack details may vary from time to time). Offers and Services are subject to availability and to being the latest advertised products, packs and prices. Please note goods are not supplied on a trial basis. E&OE.

Finance and Leasing Facilities are available for both individuals and businesses (subject to status, please ask us for full written details)

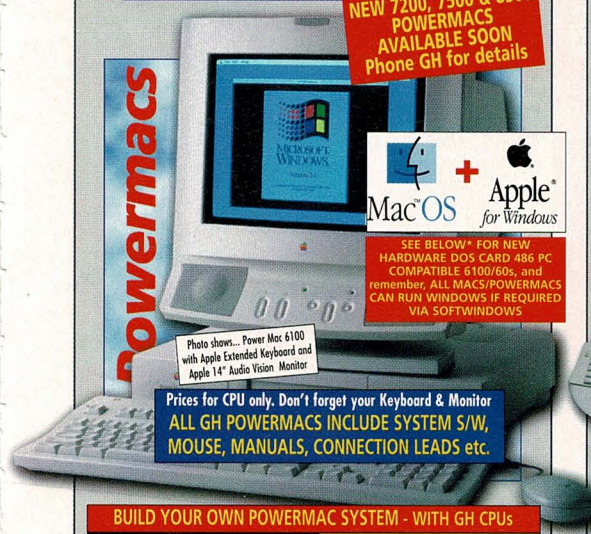
**DEFERRED PAYMENT PLAN FOR PERSONAL INDIVIDUALS* VISITING OUR SHOWROOM FOR A LIMITED PERIOD AVAILABLE ON PURCHASES OVER £500- PAY A MINIMUM OF 10% DEPOSIT NOW, THEN NOTHING MORE FOR 5 MONTHS! During that period you can settle IN FULL (without any finance charges) or continue your agreement with normal interest arrangements (ie. Direct Debit APR 27.8%/2.07% per Month - Payment Book 32.4%/2.37% per Month). And... for the first 5 months you'll also receive FREE AGREEMENT LIFE COVER. Written details/quotations available on request. *Subject to status. Please contact us prior to your visit for details of easy application requirements.*

GH... Leading the way

NEW 9500s - THE FASTEST EVER...

POWERMACS

NEW 7200, 7500 & 8500 POWERMACS AVAILABLE SOON Phone GH for details



SEE BELOW* FOR NEW HARDWARE DOS CARD 486 PC COMPATIBLE 6100/60s, and remember, ALL MACS/POWERMACS CAN RUN WINDOWS IF REQUIRED VIA SOFTWINDOWS

Photo shows... Power Mac 6100 with Apple Extended Keyboard and Apple 14" Audio Vision Monitor

Prices for CPU only. Don't forget your Keyboard & Monitor

ALL GH POWERMACS INCLUDE SYSTEM S/W, MOUSE, MANUALS, CONNECTION LEADS etc.

BUILD YOUR OWN POWERMAC SYSTEM - WITH GH CPUs

POWERMACS FROM ONLY... £749 (£880.08 inc. VAT)

GREAT GH DEALS ON ENTRY LEVEL POWERMAC 6100s

While Stocks Last

	RAM	HD	Display	CD	Keyboard	Price
6100/60	8Mb	250Mb	✗	✗	✗	£749 (£880)
6100/66	8Mb	500Mb	✗	✗	✗	£1129 (£1327)
6100/66 CD	8Mb	500Mb	✗	✓	✗	£1329 (£1562)
6100/66 + PC*	8Mb*	500Mb	✗	✗	✗	£1529 (£1797)
6100/66 CD + PC*	8Mb*	500Mb	✗	✓	✗	£1629 (£1914)

* 6100/66 PC Systems inc. 486 DX2 66MHz card & MS DOS 6.2 (Windows may be purchased separately)
* REMEMBER YOU ALSO GET AN EXTRA 8Mb RAM ON THE DOS CARD TOO GIVING 16Mb IN TOTAL!

GH BONANZA ON MID-RANGE POWERMAC 7100s

While Stocks Last

	RAM	HD	Display	CD	Keyboard	Price
7100/80	8Mb	350Mb	✗	✗	✗	£1695 (£1992)
7100/80 CD	8Mb	700Mb	✗	✓	✗	£1979 (£2325)
7100/80 CD-AV	8Mb	700Mb	✗	✓	✗	£1979 (£2325)

GH HIGH SPECIFICATION POWERMAC 8100 BARGAINS

While Stocks Last

	RAM	HD	Display	CD	Keyboard	Price
8100/100	8Mb	700Mb	✗	✗	✗	£2499 (£2936)
8100/100 CD	16Mb	700Mb	✗	✓	✗	£2879 (£3383)
8100/100 CD-AV	16Mb	1Gb.	✗	✓	✗	£3149 (£3700)
8100/110 CD	16Mb	2Gb.	✗	✓	✗	£3499 (£4111)

NEW POWERMAC 9500/120 CD 16/1000, Quad CD, and Accelerated Graphics Card

POWERMAC 9500 FROM JUST... £3799 (£4463.83 inc. VAT)

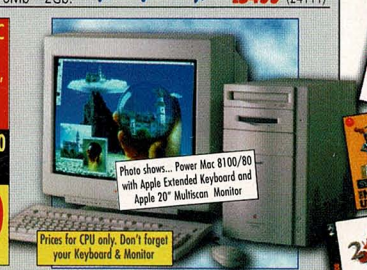


Photo shows... Power Mac 8100/80 with Apple Extended Keyboard and Apple 20" Multiscan Monitor
Prices for CPU only. Don't forget your Keyboard & Monitor

NEW GH 9500s - THE FASTEST MACS EVER!

The all new Apple Powermac 9500 Range sets new standards for speed, performance, expandability and processor upgradability. If you are a designer, engineer, multimedia expert or anyone with a need for POWER, these are the Macs to buy! Each model incorporates 6 Industry Standard PCI expansion slots for low cost plug in card possibilities. The 9500/120 CDGR & the 9500/132 CDGR come with an Accelerated 24-Bit PCI Graphics Card already fitted, whilst the 9500/132 CD is supplied without this card - allowing you to add a Graphics/Other Cards of YOUR choice.

	RAM	HD	Display	Apple Graphics Card*	CD	K/B	Price
9500/120 CDGR	16Mb	1Gb.	✗	✓	✓	✗	£3799 (£4464)
9500/132 CD	16Mb	2Gb.	✗	✗	✓	✗	£4399 (£5169)
9500/132 CDGR	16Mb	2Gb.	✗	✓	✓	✗	£4599 (£5404)

* 2Mb VRAM Included - Further 2Mb VRAM for extra performance also available - Please ask us!

"Confirm you're getting the BEST DEAL - call those friendly people at the UK's FAVOURITE RESELLER!"

"Got a technical problem?" "Need an Upgrade?" "Want a new peripheral fitting?" LOOK NO FURTHER... Our Apple Approved Engineers will do the job.

GH MONITOR MADNESS

Monitor Model	Price
Apple 14" Performa Plus (.28)	£209 (£246)
Apple 14" Trinitron (.26) LOWER PRICE	£239 (£281)
Apple 14" AudioVision (.26)	£345 (£406)
Apple 15" MultiScan (.28)	£299 (£352)
Apple 17" Trinitron MultiScan (.25)	£659 (£775)
Apple 20" Trinitron Multiscan (.26)	£1399 (£1644)
Sony 15" SFI Trinitron MultiScan (.26)	£345 (£406)
Sony 17" Trinitron MultiScan (.26)	£659 (£775)
Raster Ops 20" Trinitron Tube	£1199 (£1409)
Raster Ops 21" Hitachi Tube	£895 (£1052)

NB. Shown below are the sizes of monitors individual Macs can run (some require more Video RAM (VRAM) for Maximum number of colours that can be displayed). New 9500 Models may require extra VRAM and/or a Video Card. Please ask us for advice on what you will need for your ideal system.

LC III/Performa 450-460-630/Quadra 630/Powermac 6100-5200-6200 *Max 17"* Performa 475/Powermac 7100-8100-9500 *Max20"*

MACINTOSH KEYBOARDS

Apple Design Keyboard	£79 (£93)
Apple Extended Keyboard	£139 (£164)
Apple Adjustable Keyboard	£165 (£194)

TV, VIDEO & GRAPHICS UPGRADES

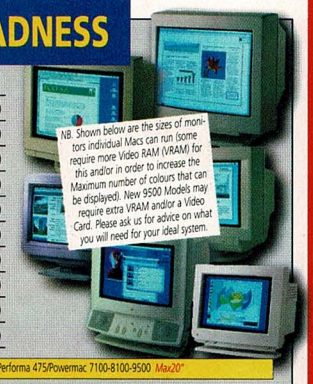
630/5200/6200 Video-In Card	£90 (£106)
630/5200/6200 Video-In and TV Tuner Card	£210 (£247)
630/5200/6200 Video-Out Card	£210 (£247)
630/5200/6200 MPEG FMV Video CD Playback Card	£199 (£234)
Raster Ops Paintboard Prism 24-Bit Accel. Nubus Graphics Card	£539 (£634)
5200 External Monitor Connection Port Kit	£29 (£34)

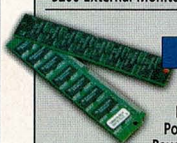
MACINTOSH EXPANSIONS

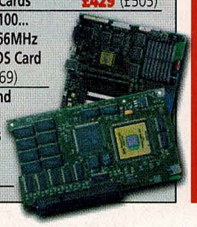
Macintosh 630/5200/6200... Comms Card	£199 (£234)
Macintosh 475 and 630... Upgrade to full Apple Powermac - Cards	£429 (£505)
Powermac 6100... PC 486 DX2 66MHz Microsoft DOS Card	£399 (£469)
Collect, fit and redelivery for upgrades please add...	£30 (£36)

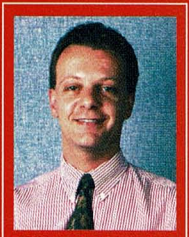
MACINTOSH CHIP UPGRADES

RAM - 4Mb SIMMS	£105 (£123)
RAM - 8Mb SIMMS	£199 (£234)
RAM -16Mb SIMMS	£359 (£422)
Powermac 256K Cache	£159 (£187)
Powermac 512K Cache	£251 (£295)
630 - FULL 68040 with FPU Chip Upgrade	£309 (£363)









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Giles Harwood - Managing Director

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BY PHONE: We'll help with any queries and when you're ready to order we accept Visa, Mastercard, Access, Switch, Connect, Delta and Lombard Creditcharge (most 'store cards' are Lombard Creditcharge and we happily accept them).

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For the convenience of personal and business customers, we list prices both with and without VAT (to the nearest full £ - shown in brackets)

EXPORT: Most items are available at TAX FREE PRICES to non EC residents & overseas UK Armed Forces Personnel (with CO's document). Please call us for confirmation of prices and carriage charges.

DELIVERY: We ship promptly & offer delivery of all orders throughout Mainland UK & most products overseas. If your order is urgent we have priority despatch options with express delivery available.

WE'RE OPEN... Monday to Saturday 9am until 5pm

"Why not visit our Apple Showroom where most models are on display".

We supply all Government/Educational Departments and Major PLC's and respond rapidly to your quotation requests

MACINTOSH SOFTWARE

GRAPHICS	Quark Xpress 3.3 - Native PowerMac	£649 (£763)
	- 68030/40 (Non P/Mac)	£587 (£690)
	Adobe Illustrator 5.5	£289 (£340)
	Adobe Photoshop 3.0	£400 (£470)
	Adobe Collection	£499 (£586)
	KAI's Power Tools	£99 (£116)
	NEW KPT Vector Effects	£99 (£116)
	NEW KPT Power Photos	£99 (£116)
	KPT Convolver	£99 (£116)
	KPT Bryce	£99 (£116)
	Aldus Freehand	£320 (£376)
BUSINESS	Claris Works 3.0	£98 (£115)
	Claris Filemaker Pro	£98 (£115)
	Microsoft Office	£362 (£425)
	Microsoft Word	£255 (£300)
	Microsoft Excel	£259 (£304)
	WriteNow	£30 (£35)
	M.Y.O.B (accounts)	£150 (£176)
	SignPost	£79 (£93)
UTILITY	SAM	£55 (£65)
	SAM 4.0 (Inc. 1Yrs Updates)	£109 (£128)
	RAM Doubler	£60 (£70)
	Speed Doubler	£60 (£70)
	Norton Utilities	£81 (£95)
	Suitcase	£59 (£69)
	After Dark 3.5	£30 (£35)
EDUCATIONAL	Encarta '95	£64 (£75)
	Cinemania '95	£42 (£49)
	Kid Pix 2	£30 (£35)
	Living Books - Tortoise & the Hare	£30 (£35)
	DK - The Way Things Work	£41 (£48)
	DK - Incredible Dictionary	£34 (£40)
	DK - Encyclopaedia Science	£64 (£75)
	DK - Ultimate Human Body	£51 (£60)
GAMES	MYST CD	£34 (£40)
	Marathon	£39 (£46)
	SIM City 2000	£30 (£35)
	Dark Forces	£34 (£40)
	A-10 Attack	£39 (£46)

MACALLY GAMES CONTROLLERS
Joystick £43 (£50)
GamePad £34 (£40)

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RED HOT SIZZLING SUMMER SAVINGS... FROM SUPER GH!

EPSON SCANNER SAVERS

STARTING AT...

ONLY... £449 (£527.58 inc. VAT)

Model	Resolution (dpi) Optical	Max	Software	Price
GT 6500	300	1200	Photoshop LE & Omnipage Direct	£449 (£528)
GT 6500	300	1200	Full Photoshop	£629 (£739)
GT 8500	400	1600	Photoshop LE & Omnipage Direct	£569 (£669)
GT8500	400	1600	Full Photoshop	£779 (£915)
GT9000	600	2400	Photoshop LE & Omnipage Direct	£689 (£810)
GT9000	600	2400	Full Photoshop	£879 (£1033)

Epson Transparency Adaptor for... 6500/8000 or 9000 Models £418 (£491)

(Please quote which scanner the adaptor is for when ordering)

EPSON WARRANTY: Epson Scanners include CUSP, 1st year on-site REPLACEMENT from distributor 'Customer Satisfaction Programme'

EPSON LAPCAT

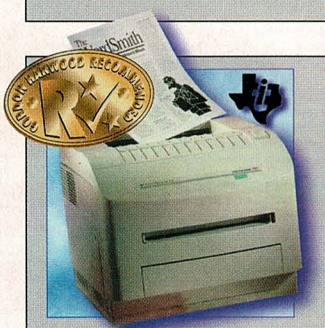
DOCUMENT MANAGEMENT

GREAT GH VALUE... £339 (£398.33 inc. VAT)

The NEW... EPSON LAPCAT DOCUMENT MANAGEMENT SYSTEM

at last provides a reliable way to manage YOUR paperwork... from business documents and reports, to product literature, even press clippings etc - there's virtually no material LapCAT can't handle. You know the feeling when your desk is full of paperwork that you just haven't had time to file - well, now you quickly and simply scan it all into the Epson LapCAT and retrieve it at will. Utilising the XEROX DESKTOP DOCUMENT MANAGEMENT SUITE you will be able to... • FILE ELECTRONICALLY - Scan, Store and Retrieve on demand • HANDLE TEXT/GRAPHICS - LapCAT will automatically segment material into Copy, Photographs, Business Diagrams etc. as a file system • AUTOFEED - 10 documents upto A4 will feed/scan (inc. business cards • UTILISE TEXTBRIDGE - Xerox OCR Software (Optical Character Recognition) and then if you...

• ADD A FAX MODEM - You have a Personal Fax and EMAIL Generator • ADD A PRINTER - You have a Personal Desktop Copier



TEXAS INSTRUMENTS 600dpi LASER BARGAIN!

600dpi LASER PRINT FROM...

£599 (£703.83 inc. VAT)

TI LASER TONERS AVAILABLE NOW!

If you've been waiting for the expense of 600dpi Laser Printing to **COME DOWN**, but not at the cost of quality - your wait is over! The new TEXAS INSTRUMENTS MICROLASER 600 & PRO 600 could be the answer to your dreams with their feature packed specifications...

• A4 Paper Size • 250 Sheet Paper Tray • Fast 5ppm (600)/8ppm (600 Pro) • PCL 5 Emulation • RISC Processor • Autosensing Connections for MAC or IBM Compatibles • True 600 x 600 dpi Resolution • Adobe Postscript Level 2 • Options to add a Universal Sheet Feeder for a variety of paper sizes (eg. Laser Labels, Laser Envelopes, Transparencies etc.) • 2 or 4Mb RAM (max 10Mb) - 600 • 3Mb RAM (max 22Mb) - 600 Pro

Both the 600 (2Mb) & 600 Pro incorporate a RAM BOOSTER* allowing many 4Mb files to be output even with 2Mb RAM. Please note that 600dpi print files are **FOUR TIMES the size of equivalent 300dpi print files FOR ALL PRINTERS - GH therefore still recommend that whilst 2Mb is adequate for WP etc., 4Mb or more will extend the capabilities for large graphic output files etc. at 600dpi.*

TI Microlaser 600 Model...	Price
Microlaser 600 with 2Mb RAM + RAM BOOSTER*	£599 (£704)
Microlaser 600 with 4Mb RAM	£725 (£852)
2Mb RAM Upgrade	£145 (£171)
MICROLASER 600 PRO Including 3Mb RAM + RAM BOOSTER*	£850 (£999)

GREAT QUALITY INKJET PRINTING ON A3 PAPER

EPSON 720dpi STYLUS PRO XL £1445 (£1697.88 inc. VAT)

GH have secured stocks of the exciting NEW EPSON STYLUS PRO XL inkjet printer which boasts an incredible 720 x 720dpi maximum resolution. Not only that, but output can be A3 PLUS BLEED! This is the ultimate inkjet Proofing Device - Ask GH for more details.

•A3 PLUS BLEED •720 X 720dpi QUALITY HIGH RESOLUTION •EASYCHANGE TRICOLOUR/BLACK CARTRIDGES •BUILT IN SHEET FEEDER •INCLUDES SERIAL CABLE TO YOUR MAC - FREE •ETHERNET AVAILABLE

NEW EPSON STYLUS PRO A4 COLOUR INKJET PRINTER

A4 version of the above with a similar specification...

•EASYCHANGE TRICOLOUR/BLACK CARTRIDGES •BUILT IN SHEET FEEDER •A4 PAPER SIZE •720 X 720dpi QUALITY HIGH RESOLUTION •INCLUDES SERIAL CABLE - FREE •PIEZO FINE DOT •EPSON MICROWEAVE TECHNOLOGY •ETHERNET AVAILABLE

New Product

£679 (£798)

EPSON STYLUS A4 COLOUR INKJET PRINTER

GH can also offer you quality inkjet printing at 720dpi with the EPSON STYLUS working with A4 sizes. Inc. FREE cable £375 (£440)

THE IDEAL COMPANION IF YOU'RE ON THE MOVE

GH HAND HELDS NEWTON HAND HELDS FROM... £199 (£233.83 inc. VAT)

NEWTON 110 -1Mb	£199 (£234)
NEWTON 120 - 2Mb	£399 (£469)
1Mb Storage Card	£60 (£70)
2Mb Storage Card	£111 (£130)
4Mb Storage Card	£199 (£234)
Connection Kit - Mac	£51 (£60)
Connection Kit - Windows	£51 (£60)
Leather Carrycase - 100/Original Message Pad	£34 (£40)
Leather Carrycase - 110/120	£42 (£50)
Battery Pack Wall Recharger including Battery - 100	£34 (£40)
Mains Charge Station inc. Batt. -110/120	£47 (£56)
Nicad Battery - For Newton 110	£14 (£17)
Nicad Battery - For Newton 100/Original Message Pad	£13 (£16)
Tapworks	£51 (£60)
Graffiti	£39 (£46)

New Product

LOTS MORE NEWTON SOFTWARE AVAILABLE - PHONE GH!

IF YOU TRAVEL AND WANT TO STAY IN TOUCH FROM YOUR CAR OR WHEREVER YOU CAN USE A MOBILE PHONE...

THEN APPLE HAVE THE ANSWER!

NEWTON120 - 2Mb with NOKIA 2110 Digital Mobile Phone, GSM Pack and DataCard £1244 (£1462)

GSM PACK - NOKIA 2110 Mobile Phone, GSM Pack and DataCard for use with Newtons £995 (£1169)

Leaf a scitex company scitex

New Product
Captures an image at 2700 x 3400 (26Mb) resolution in just 3 minutes (33MHz Quadra 950. Great quality output even at A4 size.
INCLUDES 35mm SLIDE ADAPTOR!

- Ideal for Graphic Artists, Designers, In-House publishers, Service Bureaux, Newspaper/Magazine art departments etc. that need to cut out the waiting time for their Photographic requirements... Now YOU control the imaging schedule - in a quick & easy way.
- Cut scan times. Get transparencies/photos directly into your Mac.

DIGITAL ELECTRONIC PHOTO SCANNER/CAMERA

SCITEX LEAF 2700 x 3400 LUMINA! £2999 (£3523.83 inc. VAT)

The NEW... LEAF LUMINA from SCITEX is a revolutionary 2700 X 3400 resolution full colour imaging product designed to bring production quality photographic images onto the desktop. You can use the Lumina with standard photographic accessories such as a tripod, copy stand, studio lights, lens filters/gels etc. to capture not just flat artwork, but also 3 DIMENSIONAL OBJECTS/SCENES too! Lumina is supplied with its own 50mm lens and also accepts 'off the shelf' standard Nikon fitting 35mm SLR Camera lenses for real versatility. Operation is really simple, Arrange your 'still life' items and light them etc. and Lumina will input via your Macs SCSI interface. The picture will preview/update on your Mac monitor as the image progresses! IT'S AS EASY AS THAT!

- Includes Lumina Software consisting of 2 Photoshop Plug-Ins
- Full focusing facilities for total creative control • Full MAC screen previews at 72dpi on a 19" monitor in around 20 secs.
- Use to Scan Artwork & Transparencies (35mm to 6 x 7cm) too.

THE COST EFFECTIVE WAY TO GET QUALITY IMAGES INTO MACS!

Model	Resolution (dpi) Optical	Max	Transp. Adaptor	Photoshop	Price
VISTA T630	600x300	4800	✗	✗+	£309 (£469)
VISTA T630	600x300	4800	✗	LE+	£349 (£469)
VISTA T630	600x300	4800	✓	FULL+	£849 (£998)
VISTA S8	800x400	6400	✗	LE+	£549 (£645)
VISTA S8	800x400	6400	✗	FULL+	£669 (£786)
VISTA S8	800x400	6400	✓	FULL+	£999 (£1174)
UC 1260	1200x600	9600*	✗	LE+	£669 (£786)
UC 1260	1200x600	9600*	✗	FULL+	£825 (£969)
UC 1260	1200x600	9600*	✓	FULL+	£1149 (£1350)
POWERLOOK	1200x600	9600*	✗	FULL+	£1699 (£1996)
POWERLOOK	1200x600	9600*	✓	FULL+	£1999 (£2349)

** Available soon with new interpolation software.*
+ Include MagicSCAN & MagicMATCH Software
✦ Include VistaSCAN Software

GH OMNIPAGE SOFTWARE OPTION... Buy Omnipage with ANY Umax Scanner from GH and pay JUST... £45 (£53)

VISTA S8 SCANNER BARGAIN...

£549 (£645.08 inc. VAT)

GENUINE UK UNITS... ALL GH UMAX PRODUCTS COME WITH 1 YEAR ON-SITE WARRANTY IF SOURCED IN THE UK. GREY IMPORTS DO NOT CARRY THIS OFFICIAL WARRANTY.

Transparency Adaptors (please quote Umax scanner model when ordering)	£422 (£499)
50 Sheet Document Feeder for Vistas	£379 (£445)

All listed prices are what YOU PAY, and there are NO HIDDEN EXTRAS. Prices are correct at time of going to press (Pack details may vary from time to time). Offers and Services are subject to availability and to being the latest advertised products, packs and prices. Please note goods are not supplied on a trial basis. E&OE.

Finance and Leasing Facilities are available for both individuals and businesses (subject to status, please ask us for full written details)

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Includes FREE LOCAL installation

APPLE 12/600PS COLOUR 600dpi LASER

£4999 (£5873.83 inc. VAT)

- A4 Paper Size • MONO or COLOUR output • True 600dpi Resolution
- Fast 12ppm Mono or 3ppm Colour • RISC Processor • ColorSync Ready
- Adobe Postscript Level 2 • 39 Postscript Fonts + Screen Fonts on printer
- 12Mb RAM (expandable to 40Mb) • LocalTalk, Ethernet & Parallel Ports
- SCSI Port (for External HD, font storage) • Optional Internal 240Mb HD

APPLE LASERWRITER PRINTERS...

Personal LaserWriter 300 - 300dpi, 4ppm Mono	£429	(£505)
LaserWriter 320 - 300dpi, 5ppm Mono, P/Script Level 2	£649	(£763)
LaserWriter Select 360 - 600dpi, 10ppm Mono, P/S Level 2	£1049	(£1233)
LaserWriter 16/600 - 600dpi, 16ppm Mono, Postscript Level 2	£1599	(£1879)

APPLE StyleWriter 1200 Mono
360dpi x 720dpi Inkjet 3PPM Printer for budget laser-like quality output. Quickdraw GX compatible.
£199 (£234)

APPLE StyleWriter 2400B Colour
Excellent 360dpi colour output or 720 x 360 dpi mono. Ideal for proofs - the LATEST Colour S/Writer
£349 (£410)

APPLE StyleWriter 2200 Colour
Colour 360dpi or Mono 720 x 360 dpi. Compact and Portable - Ideal if you're on the move.
£289 (£340)

StyleWriter 2200 Rechargeable Battery
£Call

NEW HP 600 PRINTER... PHONE GH NOW FOR DETAILS

HP DESKWRITER Inkjet Printers...

HP320 - Mono 600 x 300dpi	£190	(£224)
HP320 - Inc. Sheet Feeder	£214	(£252)
HP540 - Mono 600 x 300dpi	£249	(£293)
HP660 - Colour 600 x 300dpi With Resolution Enhancement!	£349	(£411)

HP DESKWRITER 560 COLOUR Inkjet Printer
Colour - upto 600 x 300dpi £339 (£398)

PRINTER CONSUMABLES

StyleWriter...			**All HP DeskWriters (except 660)...**	
I/II/Portable - Black Cartridge	£16	(£19)	Black Double Cap. Cart.	£21 (£24)
2400 - Black Cartridge	£22	(£26)	Tri Colour Cartridge	£24 (£28)
Colour Cartridge	£24	(£28)	**HP 660 DeskWriters...**	
Black Ink Tank	£6	(£7)	Black Double Cap. Cart.	£24 (£28)
Colour StyleWriter Pro...			Tri Colour Cartridge	£25.50 (£30)
Black Hi-Capacity Cart.	£8.50	(£10)	**Toners...**	
C, M, Y or K Cartridge	£7.50	(£9)	For Apple 300/320	£51 (£60)
CMYK - 4 Colour Set Cart.	£30.50	(£36)	For Apple 360	£81 (£95)
Epson Stylus...			For Apple 16/600	£90 (£106)
Black Cartridge	£17	(£20)	**Apple Inkjet Printer Paper...**	
Colour Cartridge	£30	(£35)	A4 Coated - 200 Sheets	£24 (£28)
360dpi Paper, 200 Sheet	£19	(£22)	A4 Backprint - 20 Sheets	£25.50 (£30)
720dpi Paper, 200 Sheet	£22	(£26)	A4 Glossy - 50 Sheets	£28 (£33)

GH ACCESSORIES ESPECIALLY FOR YOUR APPLE

10 - TDK 3.5" HD Blank Disks	£7.66	(£9)
50 - TDK 3.5" HD Blank Disks	£34	(£40)
3.5" Disk Head Cleaning Kit	£3.40	(£4)
GH Quality Mouse Mat	£4.26	(£5)
Essential Mouse Mechanic Maintenance Tool	£5	(£6)
Genuine Apple Desktop II Ergonomic Mouse	£38	(£45)
Syquest 44Mb Cartridge	£34	(£40)
Syquest 88Mb Cartridge	£43	(£51)
Syquest 200Mb Cartridge	£68	(£80)

200 SYQUEST
200Mb Standard 5.25" Syquest Drive
Just... £383 (£450)

PINNACLE RCD 1000
CD ROM WRITER Only...
£1299 (£1526)

88 SYQUEST
88Mb Standard 5.25" Syquest Drive
Only... £263 (£309)

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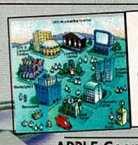
"Got a technical problem?" "Need an Upgrade?" "Want a new peripheral fitting?" LOOK NO FURTHER... Our Apple Approved Engineers will do the job.

US Robotics Sportster Modems:
Mac 'n' Fax - 14400bps £119 (£140)
288 V34 - 28800bps £179 (£210)

Supra 288 Fax Modem
Alpha numeric display, fast 28800 bps, cables, full manual. NON BABT. £189 (£222)

Motorola 3400 - V34, 28800bps Professional Solution
Communication Software, Easy Install animated Mac software, Fax Software, FREE Compuserve 1 Month Access, Manual, Auto Selects fastest available line speed, Online Help Screen, Two Year Warranty - MAC USER BEST BUY, July '95!
Motorola 3400 Pro £179 (£210)

Global Village TelePort Platinum 28800bps
£249 (£293)
Phone GH for details of other Global Village Modems in this great range at great prices



FREE... Apple e-World Kit with ALL GH Modems!!!

NEW... APPLE QUICKTAKE 150 Camera for Mac or PC
New higher spec. version of the popular QuickTake, the 150 now boasts extra memory for more stored images and a CLOSE UP LENS attachment.
QuickTake 150 Mac or PC (please state which you require on ordering) £399 (£469)

APPLE Geoport Adaptor
Geoport provides a fully featured Fax Modem with send/receive capabilities operating at up to 14400 bps on PowerMacs or AV Macintosh
£94 (£111)

Connector Kit For 2nd Mac or PC)
£48 (£57)

INTERNET Membership Kit
(Purchased with any US Robotics)
£49 (£58)

STANDARD APPLE QuickTake Camera - Mac or PC
Ideal for Multimedia Images/Estate Agents etc. (please state Mac/PC)
QuickTake Camera £229 (£269) Carrycase £40 (£47)

WACOM GRAPHICS TABLET
Pressure sensitive art pad - great for your designs

Wacom Artpad	£140	(£165)
Wacom Artpad & Dabbler	£175	(£206)
Wacom A5 Tablet	£295	(£347)
Wacom A4 Tablet	£CALL	
Wacom A3 Tablet	£595	(£700)

APPLE DESIGN SPEAKERS II
Simply plug into your Mac for some great stereo sounds. Attractively styled to match your Macintosh design.

Design Speakers II
£51 (£60)

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"As a family business established in 1955, we've supplied computers for the past 12 years. With over £32 million worth of units sold, and more than 215,000 happy customers, our trading record is second to none! Why don't you try us for your next Apple and find out why we are the UK's Favourite Apple Reseller?"
Giles Harwood - Managing Director

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ORDER HOTLINE... 01-773-836781

APPLE CD 300e Plus
Caddyless CD Drive, Double Speed with Cable & Terminator £189 (£222)

STRICTLY LIMITED QUANTITIES AT THIS SUPER LOW PRICE!

NEC 300 Double Speed CD
Caddyless CD Drive, Double Speed with Cable and Terminator, Accelerated Autocache software for even FASTER performance £129 (£152)

IOMEGA 100Mb ZIP DRIVE
100Mb/Cartridge, Only 14p/Mb, Compact & Portable, Super Software
£136 (£160)
100Mb Blank Cartridge £14 (£16)

QUALITY QUANTUM SCSI HARD DISK DRIVES...

INTERNAL SCSI HD Spec	Price	EXTERNAL SCSI HD Spec	Price
420Mb	£139 (£163)	420Mb	£189 (£222)
540Mb	£159 (£187)	540Mb	£209 (£246)
850Mb	£214 (£251)	850Mb	£259 (£304)
1000Mb	£319 (£375)	1000Mb	£369 (£434)
2000Mb	£629 (£739)	2000Mb	£679 (£798)

APPLE'S OWN HARD DISK DRIVES ARE ALSO AVAILABLE, STYLED TO MATCH YOUR MACINTOSH - 325Mb, 500Mb and 1000Mb Capacities - Please call GH.

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BY POST or FAX: When ordering include your name, address and preferably a contact phone number with your order requirements. If charging a credit/debit card include its number and expiry date (and issue number with Switch cards). Make Cheques (please allow 7 days clearance prior to despatch), Bankers/Building Society Drafts or Postal Orders payable to Gordon Harwood Computers

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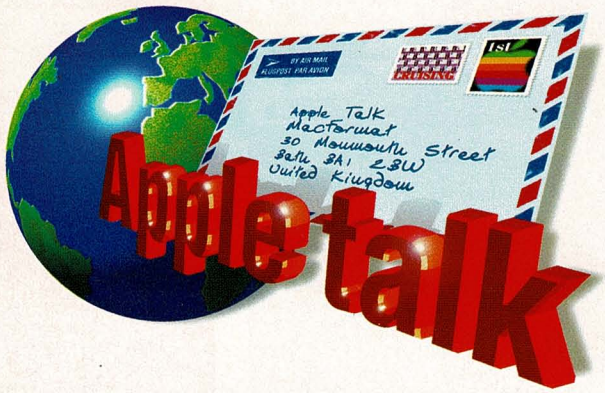

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Tell you what. You tell us what you think, and we'll pass it on to over 50,000 other Mac enthusiasts and send you a MACFORMAT binder too. We never could keep a secret, us.

Plain speaking

The number of people who know computers and have studied linguistics may be small, but as one of them I can tell you one thing for certain: any program that says it can translate from one language to another is a con.

Speaking is a creative process, and so is translating. It can be assisted by a machine, but it cannot be done by a machine. Even a simple sentence would confound all but the most sophisticated programs. Compare *I got a letter this morning* and *I got up this morning*. The listener can easily recognise that *a letter* and *up* cannot be substituted in the target language as they can in English since *a letter* is a noun and *up* is part of a phrasal verb

Writing a program to overcome this may seem difficult, but consider *My sister broke down on the way to the funeral* and *My car broke down on the way to the funeral*. In this case nouns and verbs match each other exactly, but the different meanings of the verb *to break down* can only be understood by a creative inference on the part of the listener. A 'translating' program can no more do this than a 'paint' program can paint the Mona Lisa.

William Campbell
Maynooth, Co Kildare, Eire

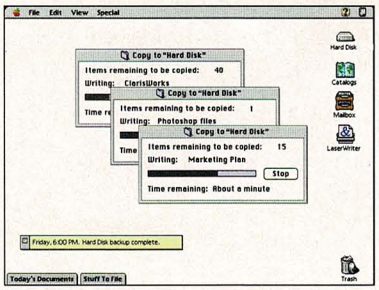
My first language was actually Hungarian (though I've forgotten most of it now, alas), and personally, I agree. The even more multilingual David Pierre Roberts, who wrote our feature on translation programs in MACFORMAT 26 (and yes, that really is his name), suggested that a translation program could be perfect if it simply had a vast database that could 'include all the phrases ever used in speech and in writing and what they mean in every single situation'. But your examples demonstrate that understanding *is not simply a matter of mixing-and-matching database entries.*

Looking into Windows?

Is it possible you could publish Apple's e-mail address? I think some customer feedback on Copland's user interface is called for. Is it just me or are Apple going all out to make it look exactly like Windows? The surround to each window, the extra button to 'minimise'? *I like WindowShade!*

Oh, and I'd like to point out a little faux pas of Mr. Spindler's. He recently called all those rushing to buy Windows 95 'lemmings'. Surely lemmings would be rushing *out* of Windows?

Andy Smith
via CIX



Windows on your Mac? Yes, I know the Mac has always had windows. I mean *Windows*. As in *95*.

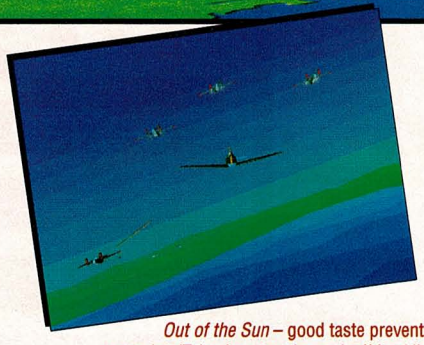
What do other readers think of the look of Copland, the next major version of the Mac Operating System? You'll have to tell us rather than Apple: lots of Apple staff have e-mail addresses, but the company doesn't seem to have a general e-mail address for public feedback. Believe me, we've asked.

Giving you a freer hand...

I read your article on *FreeHand 5.0* vs *Illustrator 5.5* (MACFORMAT 23) with much interest because I own *Illustrator 3.2* and have had some experience with *FreeHand 2.2* and *3.1*. Your reviewer may be right in stating that *FreeHand 5* has overtaken *Illustrator* in some areas, but at least one point has been forgotten in your review: in Germany (I don't know how it is in Britain) you can either get a 680x0 version of *FreeHand* or the PowerPC version, but *Illustrator* offers *both* for the same price.

So, if you are debating whether to buy a PowerMac or an upgrade card or not (as I am), *Illustrator* is the better buy as an intermediately more flexible solution. Every software company

OUT OF THE SUN AND STRAIGHT INTO TROUBLE



Out of the Sun – good taste prevents us saying 'Take that, you Jap swine!' Luckily.

I know you only print stupid letters like that from Michael Bradley and William Painter (in MACFORMAT 27 about *Out of the Sun*) so that stupid people like me will get annoyed and write in. MACFORMAT is a Mac magazine, and exchanges like this are only a sideshow, but at the risk of becoming an exhibit I have to say that I was disgusted by their letter.

I turned to the offending review to check my facts. (Note to nutters: never do this. It gets in the way of your rabid letters.) There in MACFORMAT 22, I read the review by Martin Le Poidevin (editor of *Flyer* – no better man), and he quite liked it – no more, no less. Why then were Messrs Bradley and Painter raving on about an 'inherently anti-Japanese game' and (much) worse still, 'the heart-wrenching suffering experienced by the Japanese in World War 2'?

Nanking, Manchuria, Pearl Harbor, Singapore, Bataan, comfort women, testing anthrax on those POWs they didn't starve to death, beat to death or merely shoot out of hand – heart-wrenching indeed, but no matter, for the Japanese 'have paid their debt to society'.

The truth is that even today, 50 years on, Japan's parliament cannot agree on the mildest form of recognition of Imperial Japan's activities during World War 2, never mind anything approaching an apology.

I wasn't there. I didn't experience the death marches or the forced labour camps. Perhaps Messrs Bradley and Painter did, and, if so, I ask their forgiveness for not knowing what I'm talking about. Unfortunately, I think they are spouting a load of revisionist garbage and cluttering up my favourite Mac mag at the same time. It really is taking games reviewing a bit far.

Robert Hewson
London W6

PS *Wolfenstein* is okay too.

Of all the letters we received in response to Michael Bradley and William Painter's, not one agreed with their views about the game or about our review of it.

Several writers said it was 'only a game', or felt that this discussion didn't belong in a Mac magazine. But surely you must ask more about a game than just how well programmed it is. Take a violent shoot-'em-up like Blood Bath. *Borderline, some say. What if you had an identical game, only you were shooting babies – intolerably tasteless? What if the targets were blacks, or Asians? The same gameplay, but now completely unacceptable to most people. Content, theme and 'subtext' of this kind do matter.*

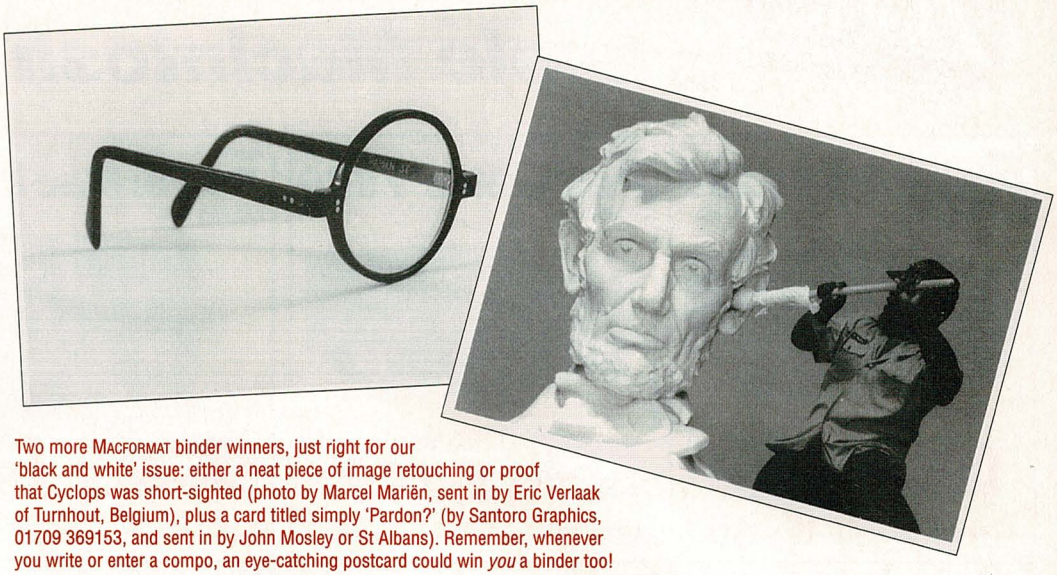
All the letters we received agreed that Out of the Sun *didn't step over the line. It doesn't stereotype or belittle the Japanese. Yet it is based on the war, and the question remains: is the subject just too painful, too violent or too contentious to base a game on?*

ought to consider including both versions, or a 'fat binary', to assure their customers that they won't pay too much for the 'same' application.

In my opinion, *Illustrator* should get 95% for 'value for money', thus raising its rating to a more realistic 87% or so.

Nicolas Arndt
Braunschweig, Germany

Good point. Having to buy new software is the 'hidden cost' of upgrading: if you already have a pretty fast Mac, you won't get much benefit from moving to PowerMac unless you also fork out for 'native' applications optimised to run faster on PowerPC.



Two more MACFORMAT binder winners, just right for our 'black and white' issue: either a neat piece of image retouching or proof that Cyclops was short-sighted (photo by Marcel Mariën, sent in by Eric Verlaak of Turnhout, Belgium), plus a card titled simply 'Pardon?' (by Santoro Graphics, 01709 369153, and sent in by John Mosley or St Albans). Remember, whenever you write or enter a compo, an eye-catching postcard could win *you* a binder too!

Size isn't everything

A designer friend recently purchased a new 630 under my guidance. His ever eagle eye noticed that the claimed 15-inch monitor was no such thing – ruler to screen it under-performed lamentably. Try measuring diagonally corner screen to corner, I suggested. Nope! Under 15 inches even corner of case to corner of case.

He phoned Apple, who of course had a simple explanation: the quoted 15 inches is measured from back tip of box to front – absolutely nothing to do with the size of the screen.

Perhaps this is another example of boys exaggerating the size of their toys. Oh dear, there are bound to be a few disappointed girls out there when they get the gift wrapping off!

M L Andrews
Bournemouth

Home entertainment system

Here's an undocumented tip that is very useful if you like playing Audio CDs while you work on your Performa 630 (with CD built in, and running System 7.5). *[Doesn't everyone? – Ed.]*

I find I can operate basic functions of the Apple CD (Play, Pause, Stop, Track forward/back) remotely using a Sony CD remote control. It works in the background while you are in any application; you do not need to have the Audio CD operation panel active. You *do* need the Video Startup Extension loaded (even if, like me, you do not have the Apple Video Player option), and it does not appear to work from a Panasonic CD remote control.

Paul Bannister
Greenford, Middlesex

But will it make the tea or darn your socks?

Suggestion box

In System 8 (codenamed 'Copland') wouldn't it be a better idea for there to be a Control Panel (or similar) like *Extensions Manager* to allow unloaded Extensions/Control Panels to load without you having to restart your Mac?

Also, when copying a file with *CopyDoubler*(™) from Symantec, you have the choice to copy the file in the background while you work on something else. It is also very fast at copying. *WindowShade* was integrated into System 7.5; can't this be integrated into Copland? I read somewhere that Apple said this could never be done, because of the design of the OS, but Symantec seem to have found a way to do it!

Ben Chapman
via FutureNet

Any more ideas for what Apple should include in the next update of the Mac OS? Ben also included a fantastic new 'Smiley' to add to your e-mail repertoire:

C={>;*{O)

He describes this as 'a drunk, devilish chef with a toupée, a moustache and a double chin'. Anyone got any other new Smileys?

Hello, boys

As a small independent publisher, all except one of our Mac operators are female. So is our senior designer. Although we find MACFORMAT interesting and informative, we couldn't hep but respond to your 'laddish' August issue. It seemed as though you were presuming that only men read your magazine. Also that these men need to be enticed into reading articles by pictures of near-naked women.

The photos you used for your articles on portable computing and plug-ins would not have looked out of place in *GQ*. Surely this is a magazine about Macintosh computers, not *Baywatch*.

If, however, you insist on using sex to sell your articles, then let's have a few photos of near-naked *men* displaying their plug-ins, for the women readers. Or would this be too threatening to your feature writers, who all happen to be men?

R Reed
Form Word Ltd
Newcastle on Tyne

Baywatch? No, just a model with a PowerBook. To avoid giving offence, our next issue will have no pictures of people at all, just Macs.

The visual theme in that issue was summer and holidays and all that. We naïvely thought it would be appropriate to use pictures evocative of that, and there was nothing more risqué than you'd see at any beach in this country or elsewhere. If that offended you, you must find summer very hard to cope with. But I hope you like the 'muscle-man' clip photos reviewed last issue and included on this issue's CD-ROM. **MF**

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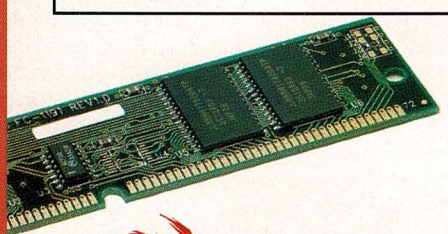

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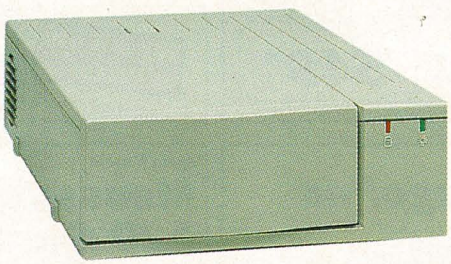

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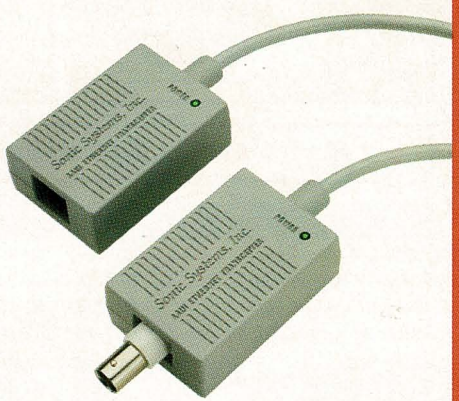

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DISCOVER THE POWER OF BLACK & WHITE

DTP DESIGN PRINTERS CLIP ART

If you're designing for mass-production – whether it's leaflets, mailouts, brochures, newsletters – black-and-white is still the only economical choice. Follow our guide to make the most of mono DTP.

Colour is great. There's nothing wrong with it. You can't buy a black and white Macintosh any more, and desktop colour printers are becoming more and more affordable. So is there any point in black-and-white DTP?

There certainly is. It's fine to work in colour if your efforts are going to be seen on-screen or you're going to print out just a few copies, but it rapidly becomes expensive and impractical to produce your newsletter, flier or poster on a colour inkjet. For small to medium scale reproduction, the order of the day still has to be photocopying or offset printing in a single colour.

Mono DTP has other advantages too. Mono layout work is less hardware-hungry than colour, in terms of raw processing power, RAM and hard disk space. More modest software might be able to do all you need, without the added expense of big-name DTP software. And all your picture scanning requirements can be taken care of with a desktop mono scanner. The resulting picture file sizes won't bust your hard drive, either.

When the time comes to output your pages, black and white is faster and cheaper (whether you're producing camera-ready pages yourself on a laser printer or film via a bureau), and final printing is dramatically less costly – full colour requires *four* plates, remember, compared to just one for mono.

So join us and we'll show you how your work can have just as much impact without colour, how you can get the best mono output, how to incorporate photographs effectively, and even how a professional-quality magazine is produced in mono with nothing more complex than *ClarisWorks*!

A GUIDE TO MAGNIFICENT MONO

- DTP – page 42: the page layout principles that mean you don't need colour
- Design – page 44: expert tips on how to brighten up your mono pages
- Printing – page 46: how you can both save money and get the best results from mono output
- Halftones – page 46: all you need to know to scan and print photographs effectively.
- Exclusive *QuarkXPress* book offer – page 47: save almost £20 on a 350-page guide to the most popular DTP program
- Clip art – page 50
- Mono laser printers – page 77

Continued on next page

You don't need colour

What will grab your readers is not flashy colours but assured, eye-catching design. Rod Lawton explains the secrets of good page layout and design.

Mac users have an embarrassment of DTP power at their disposal, but that power doesn't automatically bring visual skills with it. It's tempting to use 1,300 different fonts on a page just because they came bundled with the software. Or to print type over an imported scan because the previous version of the program couldn't do it. It's all too easy to use the features of the software just because they're there (and you paid lots for them), rather than because they help the design.

Before you start setting up pages on your Mac, bear in mind a few simple design rules that will help your black and white pages jump out and grab the reader's attention.

DTP PROGRAMS

In MACFORMAT 24 there's a huge feature on all the leading Mac DTP programs. It also includes demos on the cover CD of *QuarkXPress*, *VivaPress*, *PageMaker*, *HomePublisher* and *FrameMaker* for you to try out. A save-disabled fully operational demo of *ClarisWorks 3.0* is on this issue's cover CD, as well as MACFORMAT 24's.

A picture's worth...

Before you even start up your Mac, get a pencil, a ruler and some blank paper. You don't want to be restricted to your software's strengths, weaknesses and preferences – you want to design it yourself. The only way to do that is to work out the design beforehand. Draw a box with the same proportions as your page area, work out what's going on the page, and start sketching. When you've got roughly the design you want, then you can start up your Mac and start reproducing it on screen.

Less is more

The fewer the words and pictures you use, the easier it is to get the message across. This applies principally to advertising and other promotional literature, but it also applies to journalistic publications. Most tabloid front pages consist of a main picture, a huge headline and a principal story. Most adverts employ a dramatic, in-your-face layout with little text and a single image. If you have 500 words of copy and half a dozen pictures, but only a single page to work with, it's more difficult to convey a single, clear message. This is where good design is essential.

Turn up the contrast

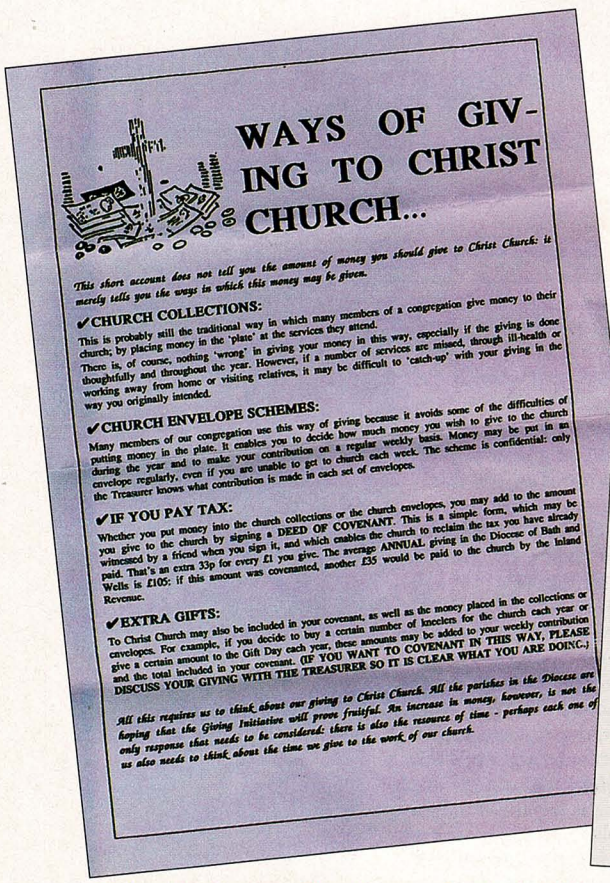
If you can't make things identical, make them very different. Putting together two similar typefaces looks like a mistake; putting a delicate serif face with a heavy sans serif looks deliberate, and makes for an excellent visual contrast. If you have two pictures on one page, choose the more important one and make it much bigger.

Be consistent

By all means introduce contrast into your layouts, but be consistent about how you use that contrast. For example, if you use a light serif face for an article and a heavy sans serif face for the headline, use the same sans serif face (but smaller) for any subsequent cross-headings or sub-headings. It helps people spot and identify headings more quickly. Make sure that the frames around your illustrations are always the same thickness. Tinted boxouts should always be the same shade of grey; column rules should always be the same width. Simple details like these add sophistication to your layouts.

Line things up

Failing to line up picture borders with text edges, baselines in adjacent columns, and other page elements makes the result look sloppy. The readers won't know why it looks sloppy, they'll just know it *does*. Alignment is more than just tidiness. Squint at your layouts to see where the edges of all the elements are, then try to align the major edges. You might not be able to get the edge of every element on the page aligned along a single imaginary line, but going some way towards this – even two or more imaginary lines – gives your layouts a more structured look. When elements



WAYS OF GIVING TO CHRIST CHURCH...

This short account does not tell you the amount of money you should give to Christ Church: it merely tells you the ways in which this money may be given.

✔CHURCH COLLECTIONS:

This is probably still the traditional way in which many members of a congregation give money to their church; by placing money in the 'plate' at the services they attend.

There is, of course, nothing 'wrong' in giving your money in this way, especially if the giving is done thoughtfully and throughout the year. However, if a number of services are missed, through ill-health or working away from home or visiting relatives, it may be difficult to 'catch-up' with your giving in the way you originally intended.

✔CHURCH ENVELOPE SCHEMES:

Many members of our congregation use this way of giving because it avoids some of the difficulties of putting money in the plate. It enables you to decide how much money you wish to give to the church during the year and to make your contribution on a regular weekly basis. Money may be put in an envelope regularly, even if you are unable to get to church each week. The scheme is confidential: only the Treasurer knows what contribution is made in each set of envelopes.

✔IF YOU PAY TAX:

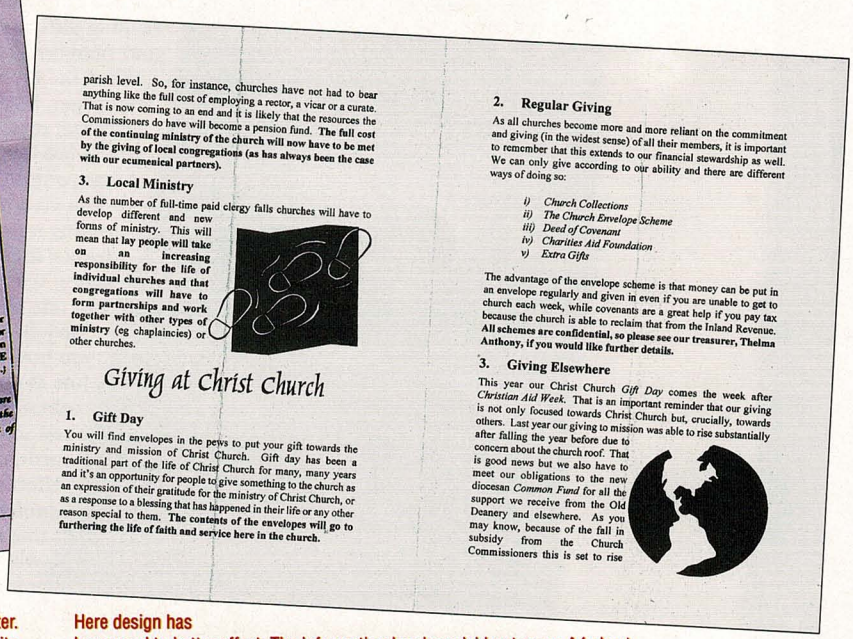
Whether you put money into the church collections or the church envelopes, you may add to the amount you give to the church by signing a DEED OF COVENANT. This is a simple form, which may be witnessed by a friend when you sign it, and which enables the church to reclaim the tax you have already paid. That's an extra 33p for every £1 you give. The average ANNUAL giving in the Diocese of Bath and Wells is £105: if this amount was covenanted, another £35 would be paid to the church by the Inland Revenue.

✔EXTRA GIFTS:

To Christ Church may also be included in your covenant, as well as the money placed in the collections or envelopes. For example, if you decide to buy a certain number of kneelers for the church each year or give a certain amount to the Gift Day each year, these amounts may be added to your weekly contribution and the total included in your covenant. (IF YOU WANT TO COVENANT IN THIS WAY, PLEASE DISCUSS YOUR GIVING WITH THE TREASURER SO IT IS CLEAR WHAT YOU ARE DOING.)

All this requires us to think about our giving to Christ Church. All the parishes in the Diocese are hoping that the Giving Initiative will prove fruitful. An increase in money, however, is not the only response that needs to be considered: there is also the resource of time - perhaps each one of us also needs to think about the time we give to the work of our church.

The layout here is not very different from an ordinary business letter. The heading breaking up distracts the attention and detracts from its impact, while the single column text is hard to read and fails to hold the reader's attention. At least it's all in small-ish bite-size chunks...



parish level. So, for instance, churches have not had to bear anything like the full cost of employing a rector, a vicar or a curate. That is now coming to an end and it is likely that the resources the Commissioners do have will become a pension fund. **The full cost of the continuing ministry of the church will now have to be met by the giving of local congregations (as has always been the case with our ecumenical partners).**

3. Local Ministry

As the number of full-time paid clergy falls churches will have to develop different and new forms of ministry. This will mean that **lay people will take on an increasing responsibility for the life of individual churches and that congregations will have to form partnerships and work together with other types of ministry** (eg chaplaincies) or other churches.

Giving at Christ Church

1. Gift Day

You will find envelopes in the pews to put your gift towards the ministry and mission of Christ Church. Gift day has been a traditional part of the life of Christ Church for many, many years and it's an opportunity for people to give something to the church as an expression of their gratitude for the ministry of Christ Church, or as a response to a blessing that has happened in their life or any other reason special to them. **The contents of the envelopes will go to furthering the life of faith and service here in the church.**

2. Regular Giving

As all churches become more and more reliant on the commitment and giving (in the widest sense) of all their members, it is important to remember that this extends to our financial stewardship as well. We can only give according to our ability and there are different ways of doing so:

i) Church Collections
ii) The Church Envelope Scheme
iii) Deed of Covenant
iv) Charities Aid Foundation
v) Extra Gifts

The advantage of the envelope scheme is that money can be put in an envelope regularly and given in even if you are unable to get to church each week, while covenants are a great help if you pay tax because the church is able to reclaim that from the Inland Revenue. **All schemes are confidential, so please see our treasurer, Thelma Anthony, if you would like further details.**

3. Giving Elsewhere

This year our Christ Church *Gift Day* comes the week after *Christian Aid Week*. That is an important reminder that our giving is not only focused towards Christ Church but, crucially, towards others. Last year our giving to mission was able to rise substantially after falling the year before due to concern about the church roof. That is good news but we also have to meet our obligations to the new diocesan *Common Fund* for all the support we receive from the Old Deanery and elsewhere. As you may know, because of the fall in subsidy from the Church Commissioners this is set to rise

Here design has been used to better effect. The information has been laid out on an A4 sheet folded in half, immediately giving the reader a reason to nose inside and find out more. The layout is more interesting, with text flowing around simple clip-art graphics.

THE REALMS OF BLACK-AND-WHITE

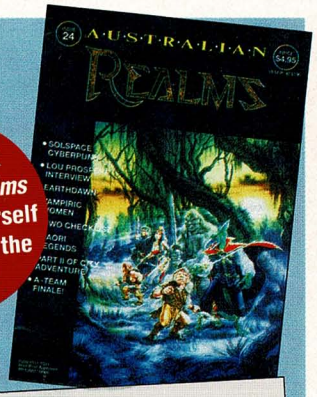
Australian Realms is the leading RPG magazine down under – a professional bimonthly title available at newsagents and everything – and it's created on an LCII using nothing more powerful than *ClarisWorks 3.0*!

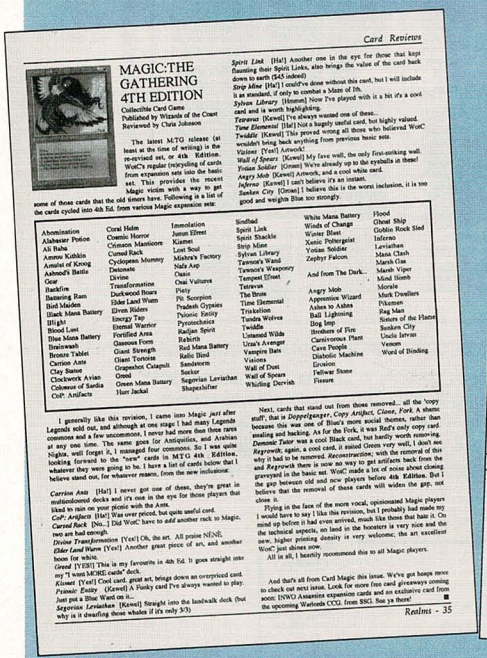
Multi-column layouts, boxes with reversed (white-on-black) text, rules and simple graphic elements are all easily produced within *ClarisWorks*. The basic 'camera-ready' pages are then output on a Personal LaserWriter.

The things that can't be done on this level of equipment are colour work (for the covers) and graphics with grey tones. The *Realms* team don't have a scanner or a printer that can handle these, so they are sent out to a service bureau, and the resulting scanned graphics are added to the camera-ready pages by the time-honoured method of manual cut and paste before the whole thing goes off to the printers.

This issue's cover CD-ROM includes the original *Claris-Works* layouts of three pages from a recent issue, so you can have a close look for yourself at how they're done.

Take a look at those *Realms* pages for yourself – they're on the CD-ROM




Card Reviews

MAGIC:THE GATHERING 4TH EDITION

Collectible Card Game
Published by Wizards of the Coast
Reviewed by Chris Johnson

The latest M:TG release (at least at the time of writing) is the revised set, or 4th Edition. WotC's regular (re)cycling of cards from expansion sets into the basic set. This provides the recent Magic victim with a way to get some of those cards that the old timers have. Following is a list of the cards cycled into 4th Ed. from various Magic expansion sets:

Abomination, Alabaster Potion, Ali Baba, Ammit Kithkin, Amulet of Kroog, Ashnod's Battle Gear, Bastafire, Battering Ram, Bird Maiden, Black Mana Battery, Blight, Blood Lust, Blue Mana Battery, Brainwash, Bronze Tablet, Carrion Ants, Clay Statue, Clockwork Avian, Colossus of Sardia, CoP: Artifacts, Coral Helm, Cosmic Horror, Crimson Manticore, Cursed Rack, Cyclopean Mummy, Detonate, Divine Transformation, Duckwood Boars, Elder Land Wurm, Elven Riders, Energy Tap, Eternal Warrior, Fortified Area, Glasses Form, Giant Strength, Giant Tortoise, Grapeshot Catapult, Greed, Green Mana Battery, Hurr Jackal, Immolation, Junun Efreet, Kismet, Lost Soul, Mishra's Factory, Nafs Asp, Oasis, Oasi Vultures, Piety, Pit Scorpion, Pradesh Gypsies, Psionic Entity, Pyrotechnics, Radjan Spirit, Rebirth, Red Mana Battery, Relic Bind, Sandstorm, Sector, Segovian Leviathan, Shapeshifter, Sindbad, Spirit Link, Spirit Shackle, Strip Mine, Sylvan Library, Tawnos's Wand, Tawnos's Weaponry, Tempest Efreet, Tetravus, The Brute, Time Elemental, Trinketeer, Tundra Wolves, Twiddle, Untamed Wilds, Urza's Avenger, Vampire Bats, Vision, Wall of Dust, Wall of Spears, Whirling Dervish, White Mana Battery, Winds of Change, Winter Blast, Xenic Poltergeist, Yotian Soldier, Zephyr Falcon, And from The Dark..., Angry Mob, Apprentice Wizard, Ashes to Ashes, Ball Lightning, Dog Imp, Brothers of Fire, Clamicvorous Plant, Cave People, Diabolic Machine, Erosion, Fallow Stone, Fissure, Flood, Ghost Ship, Goblin Rock Sled, Inferno, Leviathan, Mana Clash, Marsh Gas, Marsh Viper, Mind Bomb, Morale, Murk Dwellers, Pikemen, Reg Man, Sisters of the Flame, Sunken City, Uncle Istvan, Venom, Word of Binding

I generally like this revision, I came into Magic just after Legends sold out, and although at one stage I had many Legends commons and a few uncommons, I never had more than three rares at any one time. The same goes for Antiquities, and Arabian Nights, well forget it, I managed four commons. So I was quite looking forward to the "new" cards in M:TG 4th Edition, whatever they were going to be, I have a list of cards below that I believe stand out, for whatever reason, from the new inclusions:

Carrion Ants [Ha!] I never got one of these, they're great in multicoloured decks and it's cute the eye for those players that liked to rain on your picnic with the Ants.
CoP: Artifacts [Ha!] Was over priced, but quite useful card.
Cursed Rack [No...] Did WotC have to add another rack to Magic, two are bad enough.
Divine Transformation [Yes!] Oh, the art. All praise NENE.
Elder Land Wurm [Yes!] Another great piece of art, and another boon for white.
Greed [YES!] This is my favourite in 4th Ed. It goes straight into my "I want MORE cards" deck.
Kismet [Yes!] Cool card, great art, brings down an overpriced card.
Primal: Entity [Kewel] A Funky card I've always wanted to play. Just got a Blue Wand on it...
Segovian Leviathan [Kewel] Straight into the landwalk deck (but why is it dwarfing those whales if it's only 3/3)

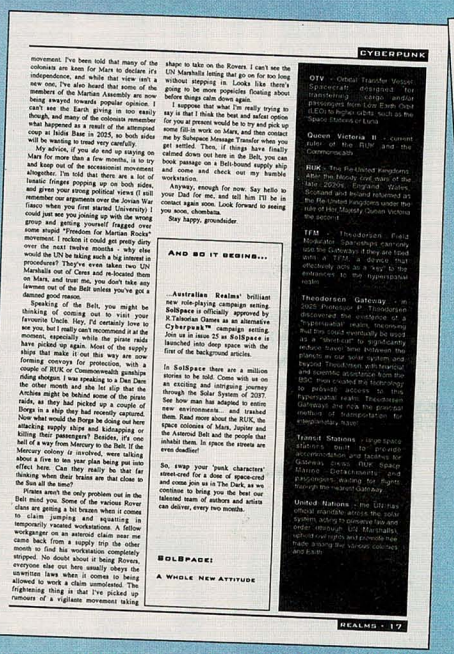
Next, cards that stand out from those removed... all the "copy stuff", that is *Doppelganger*, *Copy Artifact*, *Clone*, *Fork*. A shame because this was one of Black's more social themes, rather than stealing and hacking. As for the Fork, it was Red's only copy card. *Demonic Tutor* was a cool Black card, but hardly worth removing. *Regrowth*; again, a cool card, it raised Green very well, I don't see why it had to be removed. Reconstruction; with the removal of this and *Regrowth* there is now no way to get artifacts back from the graveyard in the basic set. WotC made a lot of noise about closing the gap between old and new players before 4th Edition. But I believe that the removal of these cards will widen the gap, not close it.

Prying in the face of the more vocal, opinionated Magic players I would have to say I like this revision, but I probably had made my mind up before it had even arrived, much like those that hate it. On the technical aspects, no land in the boosters is very nice and the new, higher printing density is very welcome, the art excellent as WotC just shines now.

All in all, I heartily recommend this to all Magic players.

And that's all from Card Magic this issue. We've got heaps more to check out next issue. Look for more free card giveaways coming soon! INWO, Ice Age, Homelands expansion cards and an exclusive card from the upcoming Warlords CCG, from BSC. See ya there!

Realms - 35


CYBERPUNK

movement: I've been told that many of the colonists are keen for Mars to declare it's independence, and while that view isn't a new one, I've also heard that some of the members of the Martian Assembly are now being swayed towards popular opinion. I can't see the Earth giving in too easily though, and many of the colonists remember what happened as a result of the attempted coup at Isidis Base in 2025, so both sides will be wanting to tread very carefully.

My advice, if you do end up staying on Mars for more than a few months, is to try and keep out of the secessionist movement altogether. I'm told that there are a lot of lunatic fringes popping up on both sides, and given your strong political views (I still remember our arguments over the Jovian War fiasco when you first started University) I could just see you joining up with the wrong group and getting yourself fragged over some stupid "Freedom for Martian Rocks" movement. I reckon it could get pretty dirty over the next twelve months - why else would the UN be taking such a big interest in procedures? They've even taken two UN Marshalls out of Ceres and re-located them on Mars, and trust me, you don't take any lawmen out of the Belt unless you've got a damned good reason.

Speaking of the Belt, you might be thinking of coming out to visit your favourite Uncle. Hey, I'd certainly love to see you, but I really can't recommend it at the moment, especially while the pirate raids have picked up again. Most of the supply ships that make it out this way are now forming convoys for protection, with a couple of RUK or Commonwealth gunships riding shotgun. I was speaking to a Dan Dare the other month and she let slip that the Arthies might be behind some of the pirate raids, as they had picked up a couple of Borgs in a ship they had recently captured. Now what would the Borgs be doing out here attacking supply ships and kidnapping or killing their passengers? Besides, it's one half of a way from Mercury to the Belt. If the Mercury colonys is involved, were talking about a five to ten person boring pot into effect here. Can they really be that far thinking when their leaks are that close to the Sun all the time?

Pirates aren't the only problem out in the Belt mind you. Some of the various Rover clans are getting a bit brazen when it comes to claim jumping and squatting in temporarily vacated workstations. A fellow workgaurger on an asteroid claim next door came back from a supply trip the other month to find his workstation completely stripped. No doubt about it being Rovers, everyone else out here usually obeys the unwritten laws when it comes to being allowed to work a claim unmolested. The frightening thing is that I've picked up rumours of a vigilante movement taking shape to take on the Rovers. I can't see the UN Marshalls letting that go on for too long without stepping in. Looks like there's going to be more popsicles floating about before things calm down again.

I suppose that what I'm really trying to say is that I think the best and safest option for you at present would be to try and pick up some fill-in work on Mars, and then contact me by Subspace Message Transfer when you get settled. Then, if things have finally calmed down out here in the Belt, you can book passage on a Belt-bound supply ship and come and check out my humble workstation.

Anyway, enough for now. Say hello to your Dad for me, and tell him I'll be in contact again soon. Look forward to seeing you soon, cheerbeana.

Stay happy, groundsider.

AND SO IT BEGINS...

...Australian Realms' brilliant new role-playing campaign setting. Solspace is officially approved by R.Talsorian Games as an alternative Cyberpunk™ campaign setting. Join us in issue 25 as Solspace is launched into deep space with the first of the background articles.

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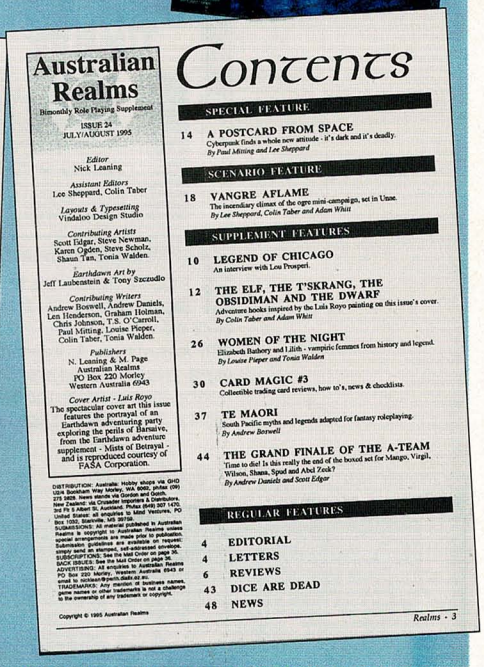
REALMS - 17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Nick Leaning

Assistant Editors
Lee Sheppard, Colin Taber

Layouts & Typesetting
Vindaloo Design Studio

Contributing Artists
Scott Edgar, Steve Newman, Karen Ogden, Steve Scholz, Shaun Tan, Tonia Walden.

Earthdawn Art by
Jeff Laubenstein & Tony Szczudlo

Contributing Writers
Andrew Boswell, Andrew Daniels, Len Henderson, Graham Holman, Chris Johnson, T.S. O'Carroll, Paul Mitting, Louise Pieper, Colin Taber, Tonia Walden.

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N. Leaning & M. Page
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44 THE GRAND FINALE OF THE A-TEAM
Time to die! Is this really the end of the boxed set for Mango, Virgil, Wilson, Shasa, Spud and Abil Zeik?
By Andrew Daniels and Scott Edgar

REGULAR FEATURES
4 EDITORIAL
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6 REVIEWS
43 DICE ARE DEAD
48 NEWS

Realms - 3

The trick with *Claris* is to use Drawing documents – most typographical features are available here. The key to flexible layouts is creating, aligning and sizing text frames.

To reverse the text colour, change Text Colour in the Style menu from default black to white, make the text frame transparent and then put it in front of a black or grey fill.

Fine-tuning the size and shape of objects is simple with the Scale Selection and Object Size features in the Option menu. You can mix columns of different widths easily.

are properly or deliberately aligned, white space suddenly looks as if it's meant to be there.

Don't be afraid of space

Many novice designers are uncomfortable with white space, and feel compelled to fill it – by increasing the size of the type or picture, or inventing something to fill it. Worthy and dull. Be brave. Restrict the number of elements on the page, and choose a strong line (or set of lines) to align them with. That way your white space will separate distinct and unrelated pieces of information, and give your eyes somewhere to take a rest – a vital counterpoint to the message. Full page ads with just a single sentence in 12-point type have fantastic impact.

Squint!

Design is about composition. To grasp the balance and structure of your page, you need to be able to step back and see it in broad, sweeping tones.

It's easy to get too close to the material you're working with. It becomes impossible to see it as blocks of tone, simple lines and patterns. Use an old photographers' trick and squint at it through half-closed eyes.

If you think of pages in terms of artistic composition, don't get obsessed with the 'rules'. Compositional rules are okay to start with, but ultimately, you need to experiment and go with what feels right. Putting things in the 'wrong' place – hard up against the edge of the sheet, or dead centre – can create tension and mystery. They can also create rubbish, so training your visual eye is an ongoing process...

Show readers the way

People need to know what they're supposed to look at first – that's why headlines and pictures are big. Pages with six same-sized headlines won't catch your eye. For wordy pieces, like magazine articles, the safe layout is a headline, an obvious introduction, then an indication as to where the main story starts – such as a drop cap and/or an emboldened first paragraph. For news pages, you must always have a single main story on each page.

Hook, line and sinker

Don't let your readers get away. It's not just a case of making a design easier to follow – you have to make it hard to put down. Your main purpose may be to convey information, but you have to put at least as much effort into making sure people read it. Tempt them with shocking headlines, arouse their curiosity with captions, get them rattled with controversial pull-out quotes, puzzle them with intriguing box headings... This is as much writing as it is design, but the more entry points your layout provides, the better your chances of hooking the reader.

Bite-sized pieces

Remember, not everyone has time to read everything on the page. If people are presented with a blank wall of text, they switch off straight away. If you're dealing with several hundred words per page, you need to find ways of presenting information in bite-sized chunks, to pull in browsers. Pull out technical information and display it in the margins. Move definitions or background information to tinted panels, away from the main body copy. And never let your body copy go more than a couple of hundred words without a crosshead. People like to know when they'll be able to finish reading before they'll even start. Remember – people don't *have* to read this stuff.

THE GOLDEN SECTION

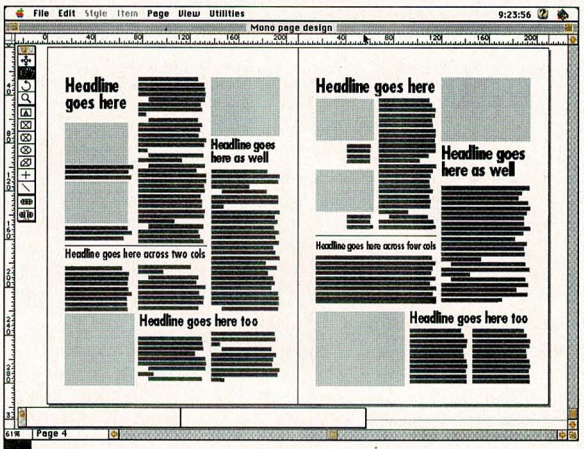
A rule that can occurs throughout nature, and can be applied to design. The definition is: 'The proportion of the two divisions of a straight line, such that the smaller is to the larger as the larger is to the sum of the two.' Apply it as you wish, but don't get too obsessed with it...

Continued on next page

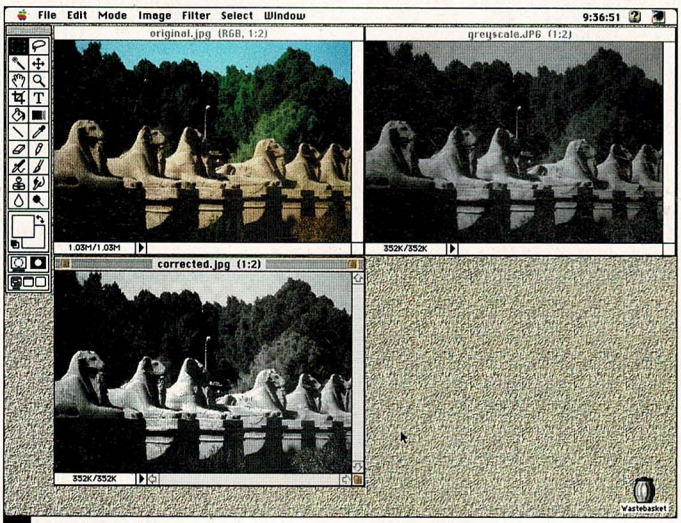
Make more of mono

Black-and-white needn't mean boring! Alistair Dabbs has 12 tips for brightening up your mono pages.

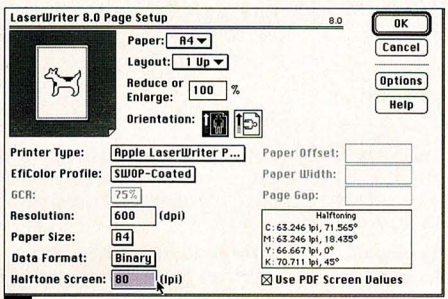
1 A classic cheat: rotate things slightly. This can make a page a bit more attention-grabbing, and it helps make black and white look more dynamic, especially combined with unusual fonts. As a design feature it's slightly hackneyed, though, and can make text difficult to read. Keep the rotation angle constant, and keep it small – much over five degrees and your reader won't bother to read at all.


Headline goes here
Headline goes here as well
Headline goes here across two cols
Headline goes here too
Headline goes here
Headline goes here as well
Headline goes here across four cols
Headline goes here too

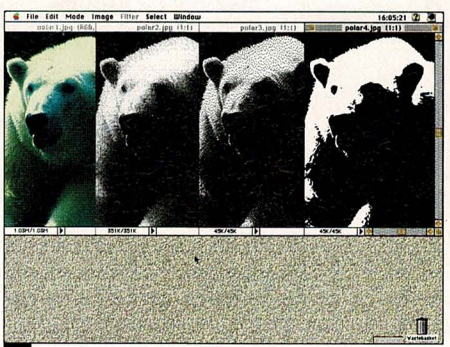
2 Build a page grid that allows flexibility in 'measure' (text column width). Instead of a three column grid, create one with six or seven column guides. Then you can set text columns across two, three or even four column guides in any combination to add variety. Despite baseline rules, remember to increase the leading as you increase the measure, to maintain readability.



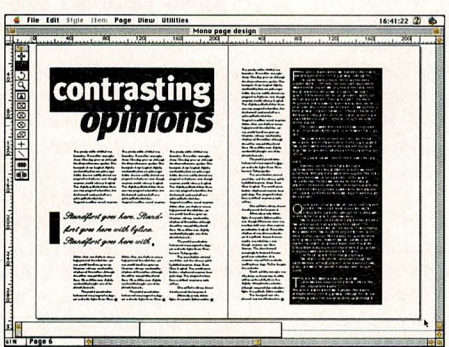
3 Convert colour pictures to mono in a graphics package before you import them. A mono printer does the conversion at output stage, but you risk losing much more detail than you think. Once converted to greyscale, experiment with increasing the brightness and contrast – this minimises the risk of a printing out a milky grey mass.



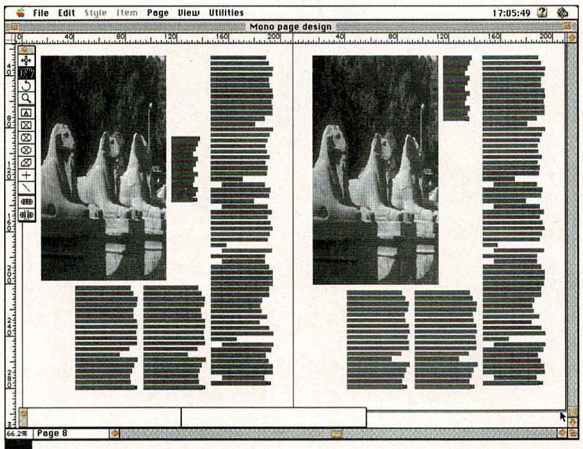
4 A typical 600dpi printer can output greys and halftone pictures at screens of around 80 to 90 lines per inch, but 300dpi models can only manage 60 to 65 lpi, and you risk banding and bleeding. Even if you manage to get much higher screens in your output, give them the photocopier test. If the laser-printed screened dots aren't perfectly clear, a photocopier won't be able to handle them, nor will your local quick-print shop.



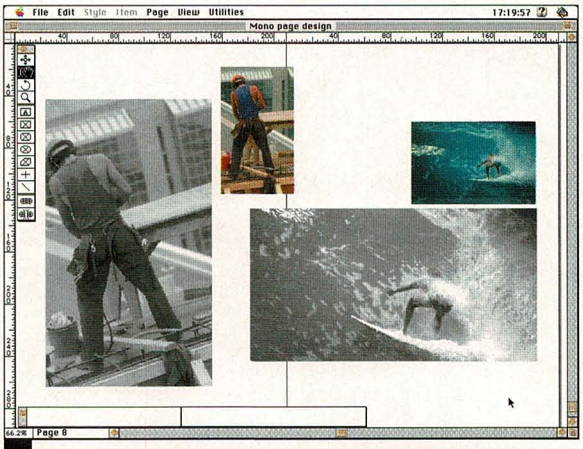
5 If coarse screens make your pictures look shabby, why not go all the way and turn it into a design feature? Turn greyscales to hard blacks and whites with a 'Gouache resist' effect. Or apply some custom screens in your image editor. Or even posterise the whole thing. You'll be guaranteed faithful printouts.



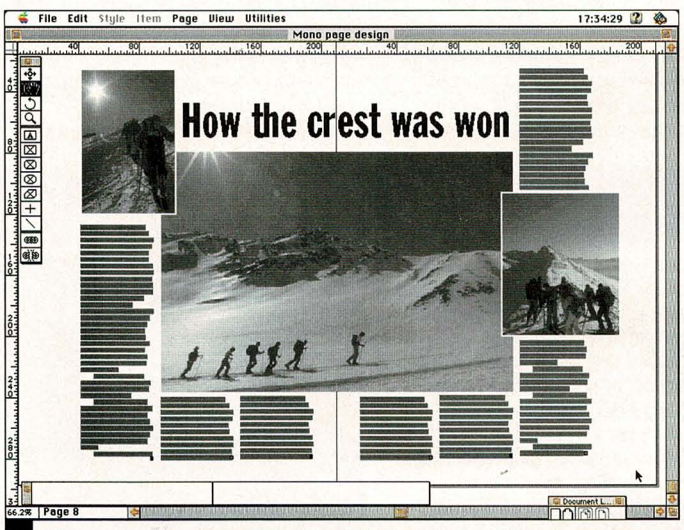
6 It's tempting to introduce plenty of grey shades as a form of 'colour', but nothing is clearer than black on white... or in this case white on black. This is especially true when using old laser printers, where greys go blotchy and text on grey backgrounds is unreadable. If you think it looks boring, cheat by printing on coloured paper.



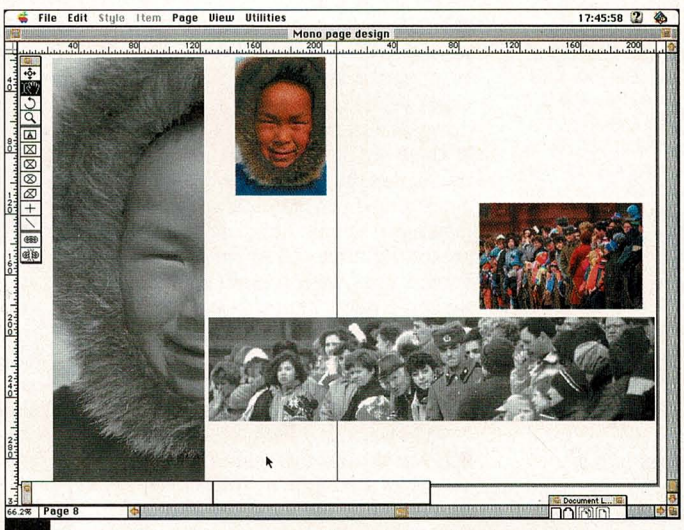
7 Often you'll want to run pictures that are relevant but otherwise uninteresting, or a spectacular colour picture that looks flat in black and white. Use clever caption design to give the picture significance on the page. Captions shouldn't float, but should be aligned to an edge. Or you can run them large as pull-out quotes.



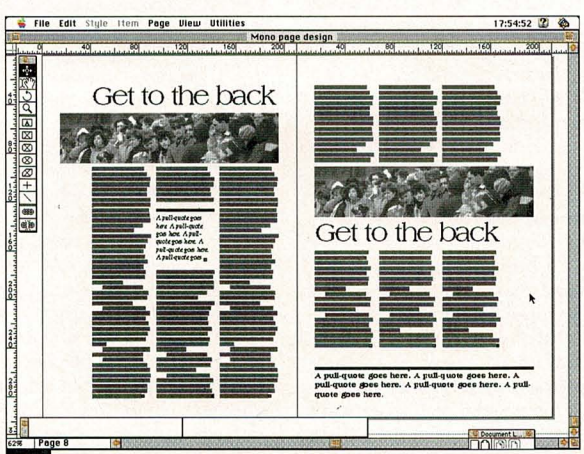
8 To break up the logical blocky feel to a DTP page, try rotating the crop of a picture rather than the picture itself (or in DTP terms, rotate the picture within its frame, not the whole picture box). This preserves your design and readability but adds depth – action even – to the layout. Many a dull picture and layout can be livened up this way.



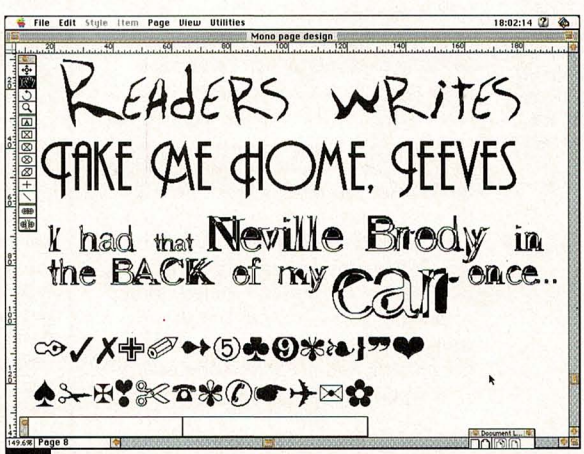
9 When you want to run several pictures of similar subjects, decide which are the most important and vary their size accordingly. Not only does this tell your readers what to look at first, but you are in effect controlling how they read. Try putting the pictures in a sequence to tell a story, possibly overlapping them to indicate the continuity.



10 Go ape with your picture cropping. This enables you to put unusual shapes on a page and make it striking. Who needs the entire crop anyway? Pictures of famous people are even better – you can easily focus in on particular areas of their faces without losing reader recognition.



11 Avoid the bathtime layout principle, whereby all your interesting elements float to the top like toy boats, while the body text rests at the bottom like water. Add variety by putting pull quotes across the bottom for a change. They're not just there to break up slabs of text – if you give them space, you give them authority too.



12 You can add visual 'colour' to a layout by using fonts creatively. Sure, it's good form to stick to two or three typefaces to maintain consistency and readability, but who says you can't throw in unusual drop caps for fun, or play around with headlines now and again? And remember that Zapf Dingbats is as much clip art as it is a font, so use it.

Continued on next page

Better mono output

Once your design is right, you then have to print it out. But printing can be an expensive and tricky process too. Rod Lawton reveals how to get it right.

Laser printers can be expensive to run. Over the course of a busy year the toner could set you back a couple of hundred pounds or more. However, there are ways you can save money on toner.

- Print all pages except final printout in draft or low-resolution mode. You can often alter the printer's toner density, too – if its manual doesn't tell you how, call the manufacturer.
- For draft copies, print two or more pages per sheet. Try your software's **Page Setup/Print** dialogues, or it might be included in your printer driver as a standard printing option.
- There are dozens of laser printers on the market, but their basic print engines come from only a few big manufacturers – Canon, Sharp and Ricoh are the big three. All Apple LaserWriters use Canon engines and Canon toner cartridges branded with the Apple name – for which you pay a premium. You might get a better deal by buying unbranded cartridges, or those used in equivalent Hewlett-Packard printers – see the table below.
- If you get through more than two cartridges a year, many mail order suppliers offer discounts for quantity.
- Many suppliers offer recycled or remanufactured toner cartridges for much less than new ones. Don't throw away your old cartridge – you might be able to sell it back or part-exchange it. Some printers use refillable toner reservoirs, but don't try refilling your cartridges yourself – you can't open most types without breaking them.

HELP!

Has your toner light just come on? You don't have a spare? And you have an urgent print job to finish? Take out the cartridge and rock it gently from side to side a few times to redistribute the toner. Unless your cartridge is really far gone, that will give you a few more pages and get you out of a hole.

TOP TIP 2

No one round here has tried this, but apparently it works... If you have a pale printout, which you can't do again, try spraying it with the kind of aerosol acrylic fixative you can get from any art shop. This dissolves and darkens the toner. You might lose a little bite, but you'll get better blacks.

Improve your laser output

Some laser printers use a combined toner cartridge/imaging drum; in most they're separate. Toner cartridges are usually no problem until they run out, but imaging drums tend to deteriorate over time. If you have to replace a combined imaging/toner unit, keep the old one and use it for rough work.

The paper you put in your printer can make a big difference to output quality. Laser printers work on a similar principle to photocopiers and work best with the same paper, often called 'xerographic'. Look for premium laser bonds and smoother, whiter, more opaque brands for best use.

If you're providing camera-ready laser printed pages for a printer to make plates from, print them at around 120% of normal size if you can. Printing oversized pages improves resolution by a corresponding factor, and as most printers photograph your pages to film before making the printing plates, they can easily shoot oversized pages down to size.

Remember, 300dpi laser printers and, to a lesser degree, 600dpi machines aren't too good at reproducing even-toned and accurate grey tints. You can buy utilities that enhance your printer's greyscale abilities, and much software gives you control over how grey tones are printed *(QuarkXPress* enables you to control halftone screen values, for example). Look out for PostScript Level 2 compatibility, which calibrates pages more closely with displayed colours and tones.

Laser printers aren't too good at large areas of solid black. You may have to compromise between the purity of your design and the practicalities of printing it. Try substituting a black panel with a dark grey one, which can disguise any unevenness.

QuickDraw GX is an enhanced ver-

SPOT THE DIFFERENCE

Many Apple branded cartridges can be replaced with the equivalent Hewlett-Packard cartridge to save money.

Apple	Hewlett-Packard
LaserWriter, LaserWriter Plus	LaserJet, LaserJet Plus
LaserWriter II, IINT, IIf, IIg	LaserJet II, LaserJet III
Personal LaserWriters	LaserJet IIP, LaserJet IIIP
LaserWriter Pro 600, Pro 630	LaserJet 4

PRINTING AND SCAN

Black and white printers are great for printing text, but what if you want to print pictures? Jim Chandler explains.

Look closely at a black and white photo. It's not really black and white at all, but lots of shades of grey, ranging from very dark in the shadow areas to very pale in the highlights. These shades, or tones, run smoothly from one to another, which is why photos are often called continuous tone images. This is possible because film and photographic paper can reproduce the various shades of grey or colour needed.

A black and white printer can't print grey, though – only black. But by printing black dots at different densities, it can create the illusion of shades of grey, at least at normal reading distances. Given clever software, the printer can approximate enough shades of grey to print a picture which appears to be a continuous tone image. In fact it's something called a halftone.

So how can you convert a continuous tone photo into a halftone you can print? A bureau or repro house will normally 'screen' a photo – that is, re-photograph it on a special camera through a fine mesh, called a halftone screen. This breaks the picture down into a series of different sized dots. The quality of the printed picture depends on how fine the mesh is in the halftone screen. This is known as the screen frequency, and is usually expressed in lines per inch.

Most DTP software will automatically screen a halftone picture, but the screen frequency is often fixed by the printer driver you're using. Apple's LaserWriters, for instance, prefer a screen frequency of either 53 or 60lpi, which is about the maximum you can expect from a 300dpi printer. If you have a printer with a higher resolution, you can increase the screen frequency, giving you 100 lines per inch on a 600dpi printer, say.

This is a conventional halftone picture enlarged many times. As you can see, the picture is actually made up of many black and white blobs, which blend together, giving the illusion of smooth graduations of grey.

Before you can print a picture, though, you've got to get it onto your Mac. Clearly, if you're going to print a picture on a mono printer, there's no point in scanning it in colour, so set your scanner to greyscale mode. This will save a lot of memory and disk space, since an 8-bit greyscale image only takes up a third as much memory as a 24-bit colour image.

Don't scan at an unnecessarily high resolution. As a rule of thumb, you needn't scan at more than about 2.5 times the screen frequency that the picture will be printed at. So, if you're printing to a 360dpi inkjet with a screen frequency of, say, 60 lines per

sion of the Mac's built-in QuickDraw imaging software. It's not a compulsory upgrade, which is just as well because it swallows up another 2Mb of RAM, but it does provide lots more printing options if you have a non-PostScript printer and QuickDraw GX-compatible software.

Improve your film output

Imagesetting is cheap enough to make generating high-resolution film an economic option these days, if you're printing more than 500 copies. The many Mac bureaus all over the country should be able to handle files from *XPress* or *PageMaker*. If you use other software, you might have to provide PostScript files.

Laser print-outs are *not* a good way of checking the weight or 'colour' of a typeface below about 18-point – fonts always tend to print out heavier on a laser printer. To gauge the weight of a font, use a font book. You'll also find that 300dpi laser printers tend to reproduce greyscales inaccurately, while 600dpi models are better, but not perfect. The surest guide to the grey tone you will get out of an imagesetter is what you see on your screen.

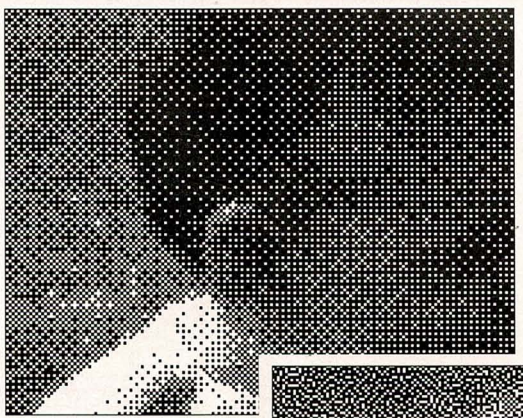
Even if you stick to PostScript fonts, they are a nightmare. Some are well-behaved, but others, like Courier, are notorious for the number of stabs different people have had at modifying them. 'Your' Courier may be different enough from the bureau's to reflow all your pages. You'd be very well advised to send the bureau all the fonts you've used in your document, and make sure they install and use them.

The much higher resolution of the bureau imagesetter means it's handling information of much greater complexity. To avoid problems:

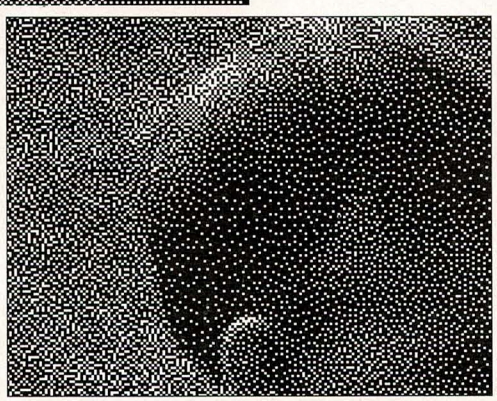
- avoid putting EPSs within EPSs – the PostScript code can get just too complex and convoluted;
- don't drastically scale down big images. Re-scan or edit them down;
- avoid long or complex paths in your PostScript graphics, and don't scale and rotate them in your DTP software – do it to the original.

For more printing help, see also this issue's free troubleshooting book. **MF**

NING PHOTOGRAPHS



Computers can generate halftones using other methods. On the left is a picture which uses a 'pattern dither' to produce greyscales. As you can see, the dithering patterns are pretty obvious, and obviously not pretty! The picture below shows a dithering method called diffusion, or 'scatter dithering'. Here, the dots are distributed semi randomly, making the picture look less obviously computer generated.

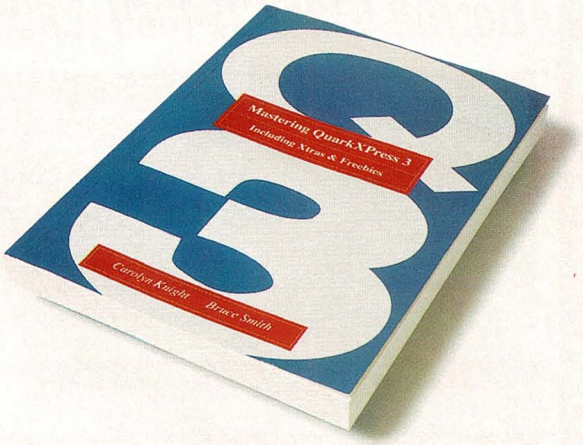


inch, your scanning resolution should be 60 x 2.5, or 150 lines per inch. This is assuming that the picture will be printed at the same size as the original. If you want to scale the picture, you can scale the resolution by the same amount. So, if you wanted to print the picture at 75% of its original size, then scan it at (60 x 2.5) x 75%, or 112.5 dots per inch. In this case you'll need to round it up to, say, 120dpi. The same principle applies for an enlargement, except of course your scanning resolution will be proportionally higher.

Once you've got your picture scanned, it's a good idea to do a test print. Very often, you'll find that you lose detail and contrast. If you have access to a copy of *Photoshop* (and many scanners come with a cut-down version, which is more than adequate for greyscale work), try playing with the brightness and contrast settings to increase the contrast.

If you're scanning a printed picture (you do have permission from the copyright holder?), you're likely to find that the picture's halftone screen clashes with the screen generated by your printer, resulting in a 'tartan' effect (called 'moiré'). You can often remove the screen from a scanned image in *Photoshop* using the 'despeckle' filter, but you're better off avoiding prescreened pictures whenever possible.

EXCLUSIVE QUARKXPRESS BOOK OFFER



Have you graduated to *Quark* only to be dazzled by all its options? This practical book from leading computer book publishers Bruce Smith Books may be just what you need. Written by two DTP experts with a wealth of real-world experience, *Mastering QuarkXPress 3* works through the program step-by-step, starting with the basics of the controls and taking you through the procedures of creating your own documents. It deals with what *Quark* can do, then walks you through a practical example. It then tackles different aspects of the program in logical order: master pages, printing, paragraph attributes, style sheets, graphics, colour, and so on.

On next issue's CD-ROM: *XPress* templates & tutorials from Bruce Smith – normally £9.95!

This 350-page book was £23.95, but as a MACFORMAT reader you can order a copy for just £4.95, including delivery! The catch? Just this: the book covers *XPress v3.0*, but not the latest versions of the program, which is now up to v3.3. But the interface is the same and the basics haven't changed – if you have a newer version, the documentation with it tells you exactly what's different. This remains a handy, easy-to-follow introduction to using the program – and £4.95 is a bargain, whatever version of *XPress* you've got.

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AWS 9150 24/4000 CD DAT Ashare & Viper	7031	AWS 9150 24/4000 CD DAT Web Server	7031
AWS 6150 16/700 CD FM Pro Server	2573	AWS 8150 16/2000 CD DAT FM Pro Server	5339
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Performa 630 4/500 CD	4	500	14" Trinitron display & keyboard		864
Performa 630 4/500 CD Plus	4	500	14" Trinitron display & keyboard		976
Performa 630 4/500	4	500	Multiscan 15" display & keyboard		886
Performa 630 8/500 CD	8	500	Multiscan 15" display & keyboard		974
Performa 630 8/500 CD Plus	8	500	Multiscan 15" display & keyboard		1017
Performa 630 8/350 CD	8	350	V-in-TV, + 14" Trinitron + keyboard		1071
Performa 630 8/350 CD Plus	8	350	V-in-TV, + 14" Trinitron + keyboard		1071
Performa 630 8/350 CD	8	350	V-in-TV, Multiscan 15" display & keyboard		1094
Performa 630 8/350 CD Plus	8	350	V-in-TV, Multiscan 15" display & keyboard		1135
Performa 630 12/500 CD DOS	12	500	DOS Compatibility card, DOS 6.22, Windows 3.11 & kb		1249
Performa 630 Video In card			85	Performa 630 Video In & TV Tuner card	215
Performa 630 Presentation kit (Video Out)			199	Power Mac Upgrade Card	545

POWER PC PERFORMA HARDWARE & BUNDLES

Performa 6200 8/500 CD & keyboard			979	Performa 6200 Plus 8/500 CD & keyboard	1045
Performa 6200 12/800 CDTV & keyboard			1206	Performa 5200 8/500 CD & keyboard	1187
Performa 5200 8/500 CD Plus & keyboard			1248	Performa 5200 12/500 CD Plus V-in-TV & kb	1450
Mac Bundle	**RAM**	**HD**	**Bundle includes**		
Performa 6200 8/500 CD	8	500	Performa 14" display & keyboard		1117
Performa 6200 8/500 CD	8	500	Multiscan 15" display & keyboard		1188
Performa 6200 8/500 CD Plus	8	500	Multiscan 15" display & keyboard		1248
Performa 6200 8/500 CD DS Plus	8	500	14" Trinitron display, Design Speakers & keyboard		1209
Performa 6200 12/500 CD Plus	12	500	V-in-TV, Multiscan 15" display & keyboard		1450
Performa 6200 12/500 CD DS Plus	12	500	V-in-TV, 14" Trinitron display, Design Speakers & kb		1404

APPLE MACINTOSH POWERBOOKS

	RAM	HD	CPU	Screen	
Powerbook 5300	8	500	100MHz 603e	9.5 GS PM	1432
Powerbook 5300C	8	500	100MHz 603e	10.4 AM	2353
Powerbook 5300CS	8	500	100MHz 603e	10.4 AM	1791
Powerbook 5300C	16	750	100MHz 603e	10.4 AM	2851
Powerbook 5300CS	16	750	100MHz 603e	10.4 AM	2232
Powerbook 5300CE	32	1100	117MHz 603e	10.4 AM	4355
Powerbook 150	4	250	33MHz 030	9.5" 4 GS PM	699
Powerbook 150 & GV Bronze Modem	4	250	33MHz 030	9.5" 4 GS PM	771
Powerbook 150 & GV Gold Modem	4	250	33MHz 030	9.5" 4 GS PM	876
Powerbook 150 & GV Mercury Modem	4	250	33MHz 030	9.5" 4 GS PM	944
Powerbook 520	4	240	50/25Mhz LC040	9.5" 256 PM	1135
Powerbook 520C EM & case & Teleadaptor	12	320	50/25Mhz LC040	9.5" 256 PM	2203
Powerbook 540C	4	320	66/33Mhz LC040	9.5" 256 or 32k AM	2656
Powerbook 540C EM & case & Teleadaptor	12	500	66/33Mhz LC040	9.5" 265 or 32k AM	3031
Powerbook Duo 280 EM	12	200	66/33Mhz LC040	9" 16GS AM	2010
Powerbook Duo 280C	4	500	66/33Mhz LC040	8.4" 256 or 32k AM	1969
Powerbook Duo 280C EM	12	500	66/33Mhz LC040	8.4" 256 or 32k AM	2315

Key: EM = Express Modem, GS = Greyscale, GV = Global Village, PM = Passive Matrix, AM = Active Matrix

Powerbook DuoDock II	660	Powerbook Duo MiniDock	245
Powerbook PCMCIA Expansion Module	110	Powerbook Duo Rechargeable Type III Battery	55
Powerbook Type II/Type III Battery	85	Powerbook Duo Floppy Adaptor	82
Powerbook External 1.44Mb drive	95	Powerbook 1xx AC Adaptor	38
Powerbook 500 AC Adaptor	95	Powerbook Duo AC Adaptor	45
Powerbook Standard Carry Case	20	Powerbook Business/Designer Carry Case	40

MEMORY

	1Mb	2Mb	4Mb	8Mb	16Mb	32Mb
Quadra, PMac, LCIII, 475, 630		59	90	185	355	679
Classic, Mac II, Q700 30 pin	55		123	255	449	
Quadra 660AV, 800, 840AV			150	280	349	718
Powerbook 520, 520c, 540, 540c			130	265	449	
			4Mb	6Mb	8Mb	10Mb
Powerbook 140, 145B, 170			108	161		
Powerbook 160, 165, 180			117	174	231	307
Powerbook 165C, 180C			130	180	230	240
Powerbook 150			152		285	
	1Mb	2Mb	4Mb	6Mb	8Mb	16Mb
Personal Laserwriter 320		82		229		
Laserwriter Select 300/310	65		165			
Laserwriter 16/600			145		260	520
Laserwriter Pro 630			150			

Dimm Memory	1Mb	2Mb	4Mb	8Mb	16Mb	32Mb	64Mb
	65	120	140	260	555	859	1787
Video RAM		**256k**	**512k**	**1Mb**	**2Mb**		
		15	25	65	120		

PSION SERIES 3

Series 3a 256k	175	Series 3a 512k	199
Series 3a 1Mb	249	Series 3a 2Mb	299
Series 3S 256k	129	PC Comms Link	49
Mac Comms Link	55	Mains Adaptor	12
Parallel Cable	23	Leather Wallet	19
Fax Modem	159	128k Flash SSD	27
128k RAM SSD	37	256k Flash SSD	40
512k RAM SSD	89	512k Flash SSD	65
1Mb RAM SSD	189	1Mb Flash SSD	89
2Mb Flash SSD	139	4Mb Flash SSD	255
3Flight Manager	58	Psion Money	40
3Base	24	3Flight Manager	58
Agenda 3 Win	59	Agenda Link 3a	35
Data Deluxe	49	Datavision	49
Finance Pack 3a	50	Games 3a only	34
Spellcheck/Thesaurus	29	Spreadsheet	24
WinLink	23	Widget Tools	42

APPLE HANDHELDS

Message Pad 120	395	Connectivity Kit Mac	55
Fax Modem card	80	Print Pack	45
Mains Adaptor	18	1Mb Storage card	60
2Mb Storage card	110	4Mb Storage card	200
NICAD Battery Pack	16	Leather Carry case	40
Recharger & Mains	54		
SOFTWARE			
GoFigure	25	PocketCall	65
ExpensePlus	38	Notion List Manager	30
Jig Saw	16	FilePad	75
TapWorks	54	Newton Utilities	23
PCMCIA SOFTWARE			
Fodors 94 Travel Mgr	23	Berlitz Interpreter	65
Time Out Guide	38	Newton Enh Pack	90

ACCESSORIES

Design Keyboard	74	Extended Keyboard	128
Adjustable Keyboard	149	Desktop II Mouse	35
PlainTalk Microphone	20	Design Speakers II	46
MIDI Interface	53	Security Kit	34
Microspeed Mouse	35	Microspeed Keyboard	65

Keyboard Deluxe Mac™ £65

The Mouse Deluxe Mac™ £35

MICROSPEED

CD-ROM DRIVES

APPLE			
CD300e+	172	CD600I	Call
CD600e	280		
D2			
2.4x External	170	4XCD	255
NEC			
3xp+	245	6speed internal SCSI	240
3xp/4e Mac software	31	Dual Speed Ext Kit	115
PIONEER			
DRM-602X 2x 6 disc	399	DRM-604X 4x 6 disc	865
TOSHIBA			
XM5201S 3.4x	195	XM3601S 4.4x	299
XM3501S 4x	325		

HARD DISKS

Bracketed figure is nominal capacity in Mb.

CONNER			
CFA540S (540)	199	CFA1060S (1.06Gb)	325
CFP2105 (2.1Gb)	468	CFP2107 (2.1Gb)	510
CFP4207 (4.2Gb)	828		
MICROPOLIS			
2217 (1.7Gb)	585	4221AV (2.1Gb)	696
3243AV (4Gb)	1065	1991AV (9.1Gb)	1850
QUANTUM			
TR420S	106	TR850S	170
FB540S	119	FB1080S	272
SEAGATE			
ST31230N (1Gb)	332	ST32550N (2.1Gb)	701
ST15230N (4Gb)	863	ST410800N (9Gb)	1776

STORAGE OPTIONS

Compact, external hard drives for desk top use.

STORAGE OPTIONS

- SCSI - 2
- Fully packaged Including software & cable
- 48 hr. FREE swap-out
- Seagate drives

1Gb	£407
2Gb	745
4Gb	1270

EXTERNAL CASED HARD DISKS
Add together the price of the disk and case. Formatting, fitting and ID setting is free of charge.

EXTERNAL CASES

3.5" Single Drive	60	5.25" Half Height	70
5.25" Full Height	120	5.25" Full Height x2	190

All with internal PSU

LASERS

APPLE			
LW 300	409	LW 320	595
LW Select 360	945	LW Pro 630	1180
LW 16/600PS	1505	LW 16/600PS & fax	1540
LW 16/600PS	1599	LW Colour12/600PS	4479
DIGITAL			
DECLaser Pro 5100	1089	DECLaser Pro 660	1170
DECLaser 3500	1495	DECLaser Pro 1200	2290
HEWLETT PACKARD			
LaserJet 5MP	695	LaserJet 4M+	1255
LaserJet 4MV	1965	LaserJet 4SiMX	2927
LaserJet Colour	4199		
HEWLETT PACKARD SUPPORT PACKS			
LaserJet 5MP	695	LaserJet 4M+	1255
LaserJet 4MV	1969	LaserJet 4SiMX	2927
LaserJet Colour	4199		

ORIGINAL HP LASER MEMORY UPGRADES

Printer	1Mb	2Mb	4Mb	8Mb
4M/4SiMX/1200/PJ	69	119	189	329
5MP/4M+/4MV/Colour	69	119	167	329
4ML	59	-	-	-

TEXAS INSTRUMENTS			
MWriter PS23	475	ML 600 2Mb	545
ML 600 Plus 4Mb	699	ML Pro 600 23 Font	740
ML Pro 600 65 Font	770	Pro E	995
Power Pro 600	1025		

PRINTERS

APPLE			
StyleWriter 1200	188	StyleWriter Portable	206
StyleWriter 2200	256	StyleWriter 2400	314
EPSON			
Stylus Colour	328		
FARGO			
Primera Pro	1299	Picturra 310	3420
HEWLETT PACKARD			
SPECIAL DeskWriter 310	**£99**		
SPECIAL DeskWriter 510	**£139**		
DeskWriter 320	165	DW 320 & ASF	176
DeskWriter 540	206	DW 320/540 Col Kit	28
DeskWriter 660C	292	Deskjet 850C	383
DeskJet 1600CM	1219		
TEKTRONIX			
Phaser 140	849	Phaser 140e	1049
Phaser 340	3995	Phaser 340+	4455

MODEMS

APPROVED connection to telecommunication systems specified in the instructions for safe subscriber connection

APPLE			
Geoport adaptor	96	Express Modem	285
520 Express Modem	315	Duo Express Modem	220
ANDEST			
RR Rocket Gold	135	RR Rocket Terbo Plat	135
VPA V22bis	349	VPA V32bis	380
GLOBAL VILLAGE *(Not BABT Approved)*			
Teleport Bronze II	87	Teleport Gold II	119
Teleport Mercury	250	Teleport Platinum	195
Powerport Bronze	89	Powerport Gold	215
Powerport Mercury	250	Powerport Platinum	299
HAYES			
Accura 144 + fax	159	Accura 288 + fax	189
MOTOROLA			
3400 V34 28k8	165		
MULTITECH			
Internet in a box	235		
SUPRA			
FaxModem 14.4 LC	89	FaxModem 28.8 v.34	160
FaxModem 144 P/B	135	FaxModem 288 P/B	135
US ROBOTICS			
Sportster 14.4 + fax	104	Sportster 28.8 + fax	156
ZOOM			
Zoom 144	93	Zoom 288	159

Zoom Fax Modem V.34
- External plug and play modem
- 28,800 bps data/14,400 bps fax
- Data fax software

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Supra Fax Modem™ 288
- 28,800 bps data/14,400 bps fax
- Flash ROM allows for convenient firmware upgrades
- Includes Caller ID
- Silent Answer™ fax & voice line sharing
- Five year limited warranty

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- V.42/V.42bis MNP 2-5 Error Correction/Data Compression
- Fax Class 1 & 2.0, Group 3
- Asynchronous operation
- Mac serial cable and MacComCenter software supplied
- BABT Approved

£156

SCANNERS

AGFA			
StudioScan	565	StudioScan IIsi full	599
StudioScan II Tranny	269	Arcus II & Tranny	2219
APPLE			
OneScanner	360	Colour OneScanner	555
QuickTake 150	360		
EPSON			
GTx 6500	388	GTi 6500	554
GTx 8500	495	GTi 8500	675
GTx 9000	597	GTi 9000	780
Transparency Unit	365	Document Feeder	319
HEWLETT PACKARD			
Scanjet 3p	229	Scanjet 3c	599
MICROTEK			
Scanmaker II SP	545	Scanmaker III	1900
NIKON			
CoolScan External	990	ScanTouch	729
LS-1000	Call	LS04500AF	Call
UMAX			
Vista T630	349	Vista S6 Pro	835
Vista S8LE	540	Vista S8 Pro	955
Vista UC1260FE	765	UC1260 Pro	1035
Powerlook Pro	1995	Page Office	280

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VISIONEER			
Paper Port	299		

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- 24bit/16.7m colour scanning
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- 4800x4800 max res. thru Ultra View technology
- 3 Pass, RGB filter
- VistaScan Software Driver

£349

Vista-S8LE
- 24bit/16.7m colour scanning
- 400x800dpi optical resolution
- 6400x6400 max res. thru Ultra View technology
- Single-pass, colour CCD
- VistaScan Software Driver

£540

Powerlook Pro
- 30 bit colour scanning
- 600x1200dpi optical resolution
- 2Mb input/output buffer
- Transparency adaptor
- Single-pass, colour CCD
- VistaScan Software Driver
- Full Photoshop

£1995

DIGITISERS

CALCOMP			
A5 DrawingSlate	285	A4 DrawingSlate	365
A3 DrawingSlate	515		
WACOM			
ArtPad	129	ArtPad+Dabbler	170
ArtPad+Painter 3	375	A5 Tablet+Painter 3	505
A5 Tablet	255	A4 Tablet	430
A3 Tablet	671		

GCC Elite XL 616
- High speed 16ppm, 600dpi
- A4/A3 Edge to Edge Printing
- Automatic Emulation Sensing
- 8Mb Memory upgradable to 64Mb
- Ozone friendly single component consumables

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GCC Elite XL 808
- 800dpi, A4/A3 Edge to Edge Printing
- Accugray Enhancement
- 12Mb Memory upgradable to 64Mb
- SCSI External Drive
- Automatic Emulation Sensing
- Ozone friendly single component consumables

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GCC Elite XL 1208
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- Automatic Emulation Sensing
- Ozone friendly single component consumables

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TRANSAX

MONITORS

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APPLE

Performa Plus 14"	199	Trinitron 14"	234
MultiScan 15"	274	MultiScan 17"	630
MultiScan 20"	1299		

FORMAC PRONITRON

80.17 17"	499	80.20 20"	1210
80.20HP 20"	1250		

IIYAMA

MF8115 15"	259	MF8617 17"	490
MF8221 21"	1247	MF9121 21"	1209
MF8621 21"	1645		

NEC

Multisync XV14	225	Multisync XV15	275
Multisync XE15	395	Multisync XV17	549
Multisync XE17	688	Multisync XP17	899
Multisync XE21	1139	Multisync XP21	1749

NOKIA VALUEGRAPH

44BS090P LR NI 14"	225	449E090P 15"	305
447V090 17"	475	447B090 17"	519

NOKIA MULTIGRAPH

449M092 15"	355	447M090 17"	629
447X090 17"	670	447M092 17"	685
447X092 17"	710	445M090 21"	1299
445M092 21"	1415	445X092 21"	1599

PANASONIC PRO SERIES

TX-T1537 15"	315	TX-D1732 17"	470
TX-D1751 17"	639	TX-D2032 20"	1119
TX-D2123 21"	1349	TX-D2103 21"	1408
445M092 21"	1415	445X092 21"	1599

PHILIPS

15B 15"	247	17C 17"	419
17T Trinitron 17"	639	17A 17"	636
20C 20"	773	20T Trinitron 20"	1199
21B 21"	1355		

RADIUS

20GS 20" 2pg GS	579	21GS 21" 2pg GS	780
Pivot GS	489	PrecisionCol Pivot	655
PrecisionColor 17	879	PrecisionCol 20V	1179
IntelliColor 20e	1275	21TXL	1469

RASTEROPS CLEARVUE

20-T 20"Trinitron	1045	20-T Enhanced 20"	1650

SONY

CPD-15SF1 15"	305	CPD-17SF1 17"	585
GDM-17SEIT 17"	827	GDM-20SEVT 20"	1225
GDM-20SEIT 20"	1419		

SUPERMAC

Supermatch 17T	649	PressView 21T	2630

TAXAN ERGOVISION

580 15"	279	880 17"	489
885 17"	615	1080 20"	895
1095 20"	1299	2100 21"	1499

VIEWSONIC

VS15ES 15"	245	VS15G 15"	319
VS17G 17"	545	VS17-2 17"	679
VS20G 20"	1030	VS21PS 21"	1331

Adapters available if required. Please call for details.

DAT STREAMERS

HP JETSTORE

2000e 2Gb	741	5000e 4-8Gb	827
6000e 8-16Gb	920		

WANGDAT

3100 Ext 2Gb	595	3200 Ext 4-8Gb	700
3400DX Ext 8-16Gb	795		

SYQUEST DRIVES

88Mb	245	105Mb	265
200Mb	360	270Mb	385

All inc cable, software & 1 cartridge

MO DRIVES

FUJITSU

128Mb	569	230Mb	615

D2

128Mb	399	230Mb	560
1.3Gb	1450		

All inc cable, software & 1 cartridge

CD RECORDING

Philips CDD522 2x	1495	JVC XR-2001 2x	1499
Yamaha CDR100e 4x	2098	Ricoh RS1060 2x	1399
Toast CD-ROM	399	Toast CD-ROM Pro	599

CARRY CASES

Universal Notebook	44	Business Traveller	149
Notepac black	26	Notepac green	26
Premier Leather case	107	Fabric Premier	75

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ACCELERATORS

DAYSTAR

PowerPro 601	Call	Turbo 601 66Mhz	869
Turbo 040 33Mhz	489	Turbo 040 40Mhz	586
PowerCard 601	521	PowerCache 030	413

For full details please call

NETWORK CARDS

APPLE

Ethernet NB	155	Ethernet LC	95
Ethernet NB TP	80	Ethernet LC TP	68
BNC/TP Transceiver	34	AUI Transceiver	54
CommsSlot Thin card	55	CommsSlot UTP card	55
CommsSlot AUI card	55		

DAYNA

DAYNAPORT ETHERNET INTERFACES 10BT-2 THIN & 3 MEDIA

E/Z Ext. 10BT Ethernet interface, any mac	209
CS Ethernet interface, Performa 630	69
E/SE-3 Ethernet interface, Mac SE	107
E/II-3 Three media Ethernet int., all NuBus Macs	107
E/LC Ethernet interface, Mac LC family	75
E/LC-M Ethernet int., Mac LCIII, 10BT & Thin	107
si/30-3 Ethernet interface, Mac IIsi	107
si/30 Ethernet interface, Mac SE/30 & IIsi	99

DAYNAPORT ETHERNET INTERFACES 10BT

Pocket SCSI/Link-T, Powerbooks & Macs	209
CS-T, for comms slot Macs, Perf 630	65

FARALLON

EtherMac LC-TN BNC	70	EtherMac LC-10T UTP	60
EtherMac II-TN BNC	86	EtherMac II-10T UTP	79
EtherThin Printer/Powerbook/Netwon Adaptors			240

PLANET

Planet II Lite	650	Planet II Full	820

FOR PRICES ON ALL HUBS PLEASE CALL

VIDEO BOARDS

RADIUS

8xj 1152x882 8bit	425	24xp 832x624 24bit	415
24xk 1024x768 24bit	599	24x 1152x882 24bit	799
LeMansGT 30bit	1099	Thunder/24 GT	1135
Thunder IV GX 1152	1599	Thunder IV GX 1360	1899
Thunder IV GX 1600	2399	PhotoBooster	699
PhotoEngine	860		

RASTEROPS

Paintboard Prism	550	Paintboard Prism GT	869

SUPERMAC

VideoSpigot	309	VideoSpigot LC	190
Spigot Power AV	720		

PLOTTERS

HEWLETT PACKARD

Designjet 230 A4 - A1	1390	D'jet 230 A4 - A0	1900
Designjet 600 A1	2716	D'jet 600 A0	3246
Designjet 650C A1	3750	D'jet 650C A0	4887
HP Designjet OSM	300		

ROLAND

Sketchmate A4	409	Sketchmate A3	545
DXY-1150	585	DXY-1250	710
DXY-1350	945	GRX-350	2379
GRX-450 A0	2968		

SUMMAGRAPHICS

Mono A1	1865	Colour A1	2345
Mono A0	2345	Colour A0	2680

CONSUMABLES

DISCS	10	100	250
Unbranded 1.44Mb DSHD	50p	40p	35p
Branded 1.44Mb DSHD	60p	40p	35p
CD RECORDABLE	**1**	**10**	**100**
650Mb/74min	10	8	7

CABLES	2m	3m	5m	10m
Macintosh Printer	5	-	8	15
Ethernet Coax BNC-BNC	5	-	8	10

	1m	2m
SCSI C50M-C50M	8	15
SCSI C50M-HC50 Micro D	19	29
SCSI HC50 Micro D - HC50 Micro D	29	39
SCSI C50M-HC68 Wide SCSI	65	-
SCSI HC50 Micro D - HC68 Wide SCSI	65	-
SCSI D25M-C50M	6	19

ADAPTORS

BNC Twist-on	2	BNC T-Piece	2
BNC Terminator	5	SCSI C50 Terminator	10

ORIGINAL INKJET CARTRIDGES

SWriter 2200 blk	25	StyleWriter 2200 col	29
StyleWriter II/1200	14	SWriter Pro HiCap Blk	7
SWriter Pro Colours	8	A3 Colour Black	19
SWriter blk Tank	11	SWriter Col Tank	17
A3 Colour Colours	23	SWriter 2400 Black	20
SWriter 2400 Col	25	Epson Sty Col, Black	12
Epson Stylus Col, Col	29	HP DW 310/320/Port	15
HP Deskwriter Black	18	HP Deskwriter Colour	18
HP DJ 1200CPS Black	17	HP DJ 1200CPS Cols	24
DJ 850C/1600CM Blk	20	HP DJ 850C Colour	25
HP DW 660C Black	19	HP DW 660C	20
HP Paintjet Colour	20	HP Paintjet Black	18
HP Paintjet XL Black	15	HP Paintjet XL Colours	17
HP Paintjet XL300 Blk	15	HP Pjet XL300 Colours	17

TONERS

Personal LW300/320	45	LW Select 300/310	49
LW Select 360	71	LW 16/600 Pro 630	91
LW Pro 810	200	HP Laserjet 4ML/4MP	43
HP IIIsi/4SiMX	85	HP Laserjet 4M/+	68
HP Laserjet 5MP	69	TI MicroLaser	30

DATA CARTRIDGES

2Gb/4Gb 90m DAT	16	4Gb/16Gb 120m DAT	20

MO DISCS

128Mb 3.5"	25	230Mb 3.5"	39
1.3Gb 5.25"	75	1.5Gb 5.25"	95

SYQUEST CARTRIDGES

44Mb	29	88Mb	34
105Mb	35	200Mb	52
270Mb	41		

SOFTWARE

ACCOUNTING

MYOB 3.0	170	Ritz Accounting	239
Ritz Meridian	132		

BUSINESS

ACT 2.0	145	ARoute Exp GB & Ire	89
Claris Organiser	39	Lotus Notes Express	135
MS Mail 3.1	173	MS Project 4.0	155
Now Contact	59	Now Up-To-Date 3.0	59
Ritz Meridian	132	Symantec C++ Pro	205

CAD

MiniCAD 5.0	450	TurboCAD	69

COMMUNICATIONS

Connect II	120	Fax Pro	69
Snatcher 1	35	MicroPhone LT	39
MicroPhone II 5.0	90		

DTP & FONTS

Acrobat 2.0	120	Acrobat Pro 2.0	355
Fontographer 4.1	335	PageMaker 5.0	369
QuarkXPress 3.31	550	QuarkXPress PMac	625
Super ATM	49	Typestry 2.1	150
Type Reunion	30	Type Styler	97

DATABASE

4D First	179	FileMaker Pro 2.1	89
MS Fox Pro 2.5	72		

GRAPHICS

Add Depth	60	Adobe Collection	469
Astound 1.0	85	Canvas 3.5	155
Claris Draw	191	Colour Studio	289
Dabbler	60	Debabelizer Lite	83
Dimensions 2.0	95	Envelopes	75
Fetch 1.2	130	Font Studio 2.0	245
Freehand 5.0	280	Gallery Effects	245
Illustrator 5.5 CD	255	Infini-D	399
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KPT Bryce	95	KPT Convolver	95
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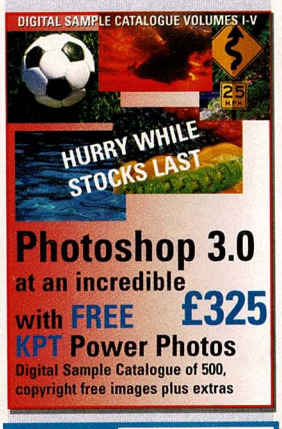

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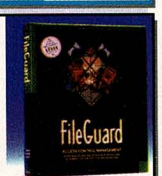

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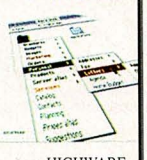

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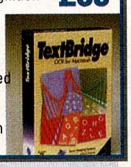

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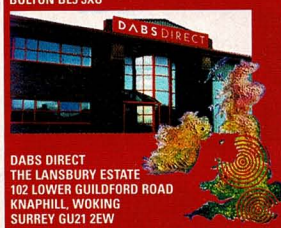

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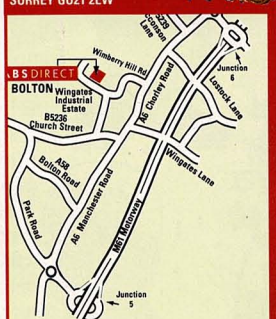

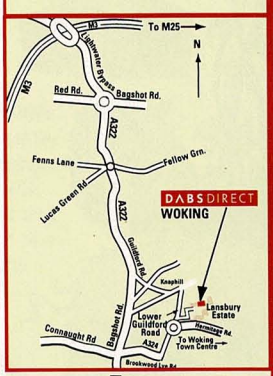

TERMS

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Easy on the eye

Whatever the subject, you'll be able to find a picture to supplement it if you delve into a few clip art collections. Alistair Dabbs tries out a few for size.

Think visually. The majority of the population tends to do so, and that's what clip art is all about. No one wants to sit and listen to a presentation; they want to be shown, to be led along, and to be entertained along the way.

The easy way to inject life into any dull textual matter is to use a graphic – it can highlight your most important concepts and help explain the more difficult ones. If you're too busy producing the text to even think about drawing pictures to go with it, or perhaps you're all thumbs when it comes to art anyway, clip art is a ready and cheap answer.

Clip art is deliberately hand-drawn, without a regular photo in sight, and adds immediate personality to your text. A photograph of a mountain can only be what it is: a mountain. An artist's impression of a mountain in clip art, however, is both stylised and simplified, and can be used for all sorts of 'mountain' analogies – from symbolising company goals to being part of a logo for a skiing club.

Clip art has grown beyond the corny pointing fingers and shaking hands used by the early business-oriented market. Today you can get clip art libraries on CD-ROM containing just about every subject under the sun. That doesn't stop the graphics from being corny or dreadful, of course, but with the amount of variety and choice available there are plenty of alternative images for each subject area.

Even if the graphics aren't just right, you can probably edit them from their generic file formats: vector EPSs in *Illustrator* or *FreeHand*, and TIFFs and PICTs in any bitmap editor you like, from the commercial *Photoshop* to the shareware *Graphic Converter*. Even untouched, any DTP package and most modern word processors can import these graphics without a problem.

Some clip art libraries offer interesting extras, such as free fonts and texture tiles. Fonts – even bad ones – are always welcome, and tiles can be used in a variety of ways, often as an area fill in your graphics package. In most cases, use of the artwork is unrestricted, although you're not allowed to resell it as your own work, of course. There's often a friendly suggestion that you might add a credit line somewhere if you felt so inclined, but any clip art library that requires you to give credits all over the place as a condition of the licence should be avoided. You buy the clip art to save time, not waste it.

A new clip art product is released every week, but here's a rundown of the state of the market. It's designed give you a flavour of what clip art is all about, and some ideas of where you could use it.

Sample some clip art for yourself on our cover disk! Details on page 10

MAKE YOUR NAME

Fancy becoming a clip art designer for Corel? Each year, Corel hold an international computer art competition for all comers. Winners not only receive all sorts of goodies and money, but also see their designs displayed to the world in Corel's *ArtShow* coffee table book and CD-ROM.

COREL GALLERY 2

Unlike most clip art libraries, Corel don't add new titles to their collection – they just replace the first one with an upgrade. Owners of *Corel Gallery 1* will recognise plenty of the stuff in this new library, but there are a lot of extras there too, making it worth buying.

Coming on one CD-ROM, *Gallery* contains an unfeasibly huge collection of goodies: 15,000 vector and bitmap images on every conceivable subject, plus 500 TrueType and Type 1 fonts, 75 audio files and 10 QuickTime movies. The fonts are variable in quality, but cover every possible occasion, while the sounds and movies are fun, and handy for multimedia presentations.

Corel supply their usual mammoth colour reference manual to help you find the clip art you're after. Some of it is unusable, and much of it predictably corny, but there's so much here you can hardly fail to find something that hits the mark. *Corel Gallery's* special feature is its *Gallery* image browser, which works as a thumbnail viewer (reading many file types, including Corel's own CMX interchange format), and also as a batch printer and image manager for categorising your images, whether they're on the *Corel* CD or from elsewhere. It's all a bit of a jumble rather than an integrated unit, but you get so much for your money, current versions of *Adobe Type Manager* and QuickTime 2.0 included, it's hardly worth complaining about the naff clip art portraits of endless famous

Over 15,000 clip art images, 500 fonts, 75 audio files and 10 QuickTime movies – if you can't find what you want in *Corel Gallery 2*, where can you find it?

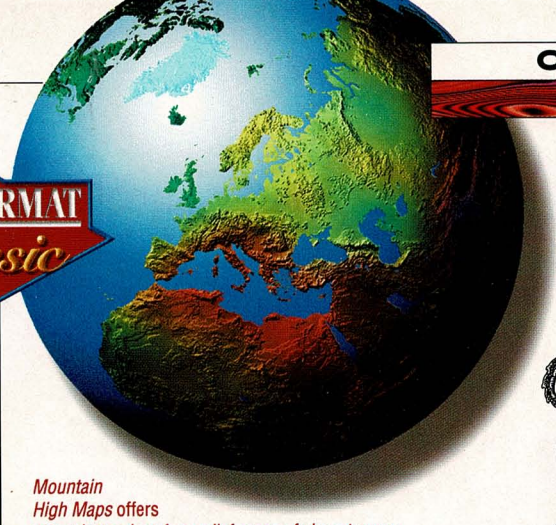
Americans you've never actually heard of. *Corel Gallery* is well worth checking out.

MACFORMAT Classic

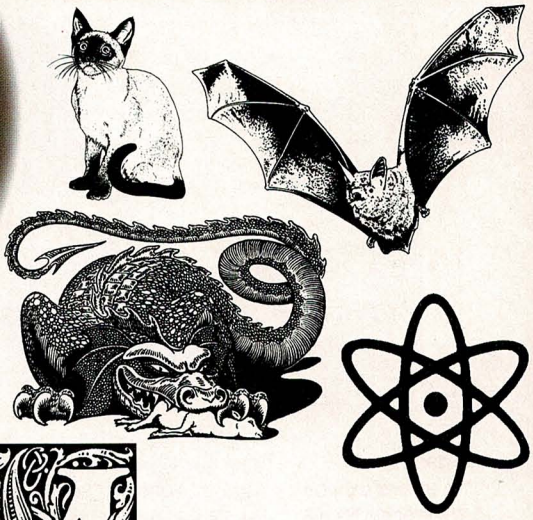
COREL GALLERY 2

Disk format: one CD-ROM
No of images: 15,000
Image formats: PICT, JPEG, CMX
Price: £79
Contact: Corel Corp on 0800 581028

MACFORMAT RATING 90%



Mountain High Maps offers you enhanced surface relief maps of almost every description – the ultimate geographical resource.



MOUNTAIN HIGH MAPS

The *Mountain High* range is undergoing an upgrade, and we caught an early copy. Unlike most map clip art, these are all artificially exaggerated 3D surface relief maps. Even *Frontiers* has a relief option, in addition to its usual political boundaries view.

The maps are in greyscale, enabling you to apply your own colours without restriction. *Mountain High Maps* is a two-CD set, one disc containing maps of countries and continents, the other containing maps of the world and 3D globes. Each map comes in three formats: the elevation of the entire area, elevation of just the land area, and a mask for the land area. This mask enables you to separate land and sea for colouring in *Photoshop*.

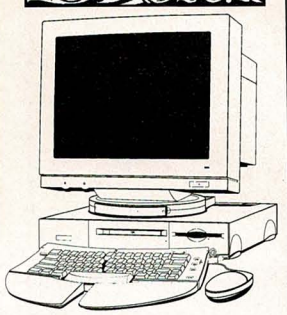
Frontiers is available separately if all you need is 2D boundary outlines, but it's an essential addition to the main *Maps 2.0* pack, turning it into the ultimate geographical clip art resource, and not just a 3D novelty. The emphasis is on *resources*: highly detailed though they are, you wouldn't just slap these greyscale images directly into your artwork without working on them first. And the high-res versions require serious amounts of memory.

Mountain High Globe Shots, an associated CD, presents you with beautiful greyscale and full colour globes, complete with 3D surface relief. These are expensive, but they're simply stunning to behold.

MOUNTAIN HIGH MAPS

Disk format: CD-ROM
No of images: *Maps 2.0* – 1,000, *Frontiers 2.0* – 74, *Globe Shots 1.0* – 267
Image formats: TIFF, EPS vector
Price: *Maps 2.0* – £816, *Frontiers 2.0* – £141, *Globe Shots 1.0* – £170
Contact: Digital Wisdom on 01223 566250

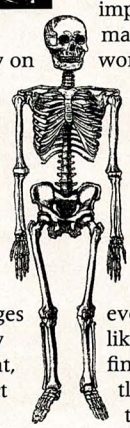
MACFORMAT RATING 90%



DESKGALLERY

This is the only library reviewed here that concentrates completely on black and white images, and, as a result, you can guarantee that all of the graphics from *DeskGallery* output without problems to a mono laser printer.

And talk about quantity – this three CD set covers around 400 categories across the whole field of life and death. The 500-page reference manual makes the images look rather similar in their strictly outline (not greyscale) format, but focus on a specific subject area and you can see how different the styles are. Alongside the typical collections of page borders and cartoon Santas are some neat, almost iconographic, impressions of world landmarks and wonderful old-world engravings.



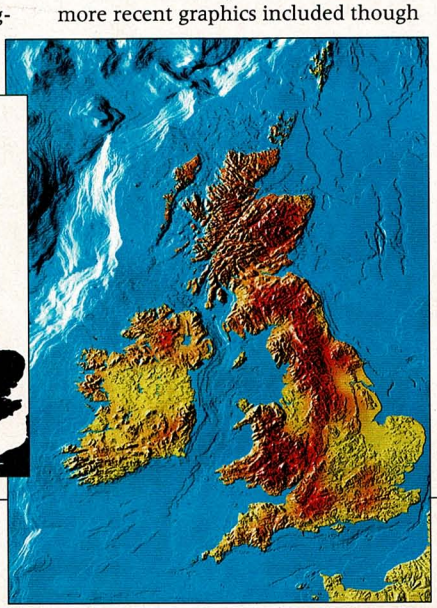
DeskGallery is unique in that it provides the kind of classic pictures that you normally have to hang around antique bookshops to find. Many could have been lifted from Victorian greeting cards, and others date even earlier. Look up a subject area like Turtles, for example, and you find 30 images of tortoises and turtles ranging in style from realistic to artistic to symbolic. Some of the more recent graphics included though

DeskGallery offers the widest imaginable range of line-drawn mono images – some classic, others less-than-perfect.

Continued on next page

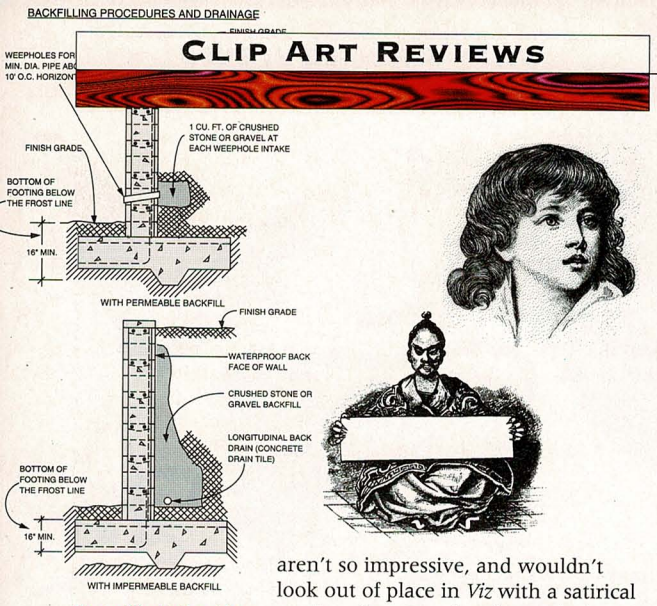
MACFORMAT Classic

Because the *Mountain High Maps* are in greyscale, you can colour them to meet your needs.



BEYOND CLIP ART

Many CD libraries now also include free fonts and graphics utilities. Some of them even include multimedia presentation resources such as sound files and QuickTime videos. If you're serious about design, these are well worth seeking out.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BOTTOM OF FOOTING BELOW THE FROST LINE
16" MIN.
WITH IMPERMEABLE BACKFILL

The architect clip art in *DeskGallery* offers fine detail in EPS format.

aren't so impressive, and wouldn't look out of place in *Viz* with a satirical caption. Some are low in resolution, but this is in sharp contrast with the architect clip art, which is produced in unparalleled fine detail in EPS format.

DESKGALLERY

Disk format: three CD-ROMs
No of images: 30,000
Image formats: TIFF, EPS bitmap
Price: $49.95
Contact: Zedcor Inc on 00 1 520 881 8101.

MACFORMAT RATING 85%

CREDIT TO...

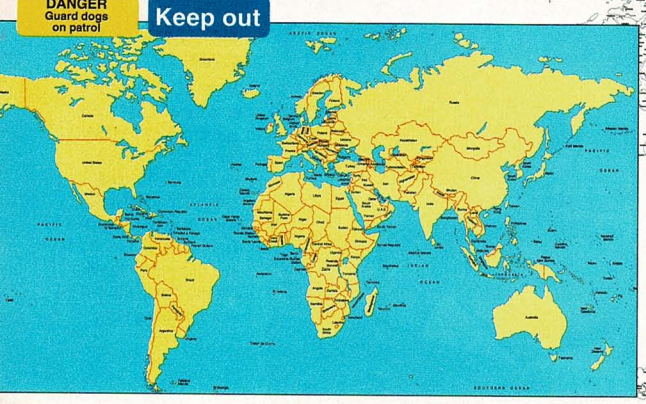
Check out the licence restrictions before you buy. Clip art libraries that require you to credit every graphic with their name are a pain. Those that restrict you to a particular number of uses per publication may be best avoided.

ALL OF INSTANT ART

A multi-featured compendium with its own flavour, *All of Instant Art* is a compilation of several Magnum clip art libraries on one CD-ROM, with a bunch of strange extras thrown in for free. For instance, you get nearly 50 classic books and documents as text files, from *The Jungle Book* to *Dracula*.

A lot of work has gone into producing the clip art, and it shows. There is a large gallery of bitmap images in 22 volumes saved at Mac monitor resolution, but the real stars of the CD are the PostScript graphics. These are editable vector EPSs, which provide you with clean edges, smooth curves and virtually unlimited scope for resizing. They are limited to two subject areas, maps and signs, but are some of the best examples of outline clip art you'll find for the price.

The maps are wonderful, if only because they concentrate on the UK and Europe instead of the US, for a change. Maps of UK postcode regions are included, alongside the usual coastline and county views, and even the European maps are finely detailed, with regions and major towns indicated. The signs are well-presented too, with complete ready-formatted notices, such as office fire alarm drills and first aid instructions, as well as the usual Stop and Danger signs. These are accompanied by a wide range of signs in graphic font form, enabling you to literally type out tourist grade symbols, recycling motifs and famous logos from your keyboard.



All of Instant Art offers a particularly fine collection of maps and signs in EPS format, as well as a huge collection of bitmap images.

ALL OF INSTANT ART

Disk format: one CD-ROM
No of images: 5,000
Image formats: EPS vector, PICT
Price: £145
Contact: Magnum Software on 01884 820240

MACFORMAT RATING 80%

MapArt Designer offers little more than this – flat national border outlines. The American maps are more accurate than their European counterparts.

MAPART DESIGNER

Judging by the number of clip art maps available, they must be a big business. For a graphic designer, maps can be a vital resource, even if you're only after world images or coastlines. What is important is choosing the best product. Despite its classy presentation, Cartesia's *MapArt Designer* series doesn't quite fit the bill in every respect.

The American maps in *MapArt USA* appear to be considerably more accurate than the *MapArt World* maps. For example, on the UK section of the European Continent map, someone has forgotten to include Birmingham, but managed to remember the sprawling metropolis of Sunderland, while the whole of Scotland is represented by Inverness.

The geography isn't totally lacking, with continental and world maps indicating longitude and latitude, and some pleasant Mollweide and sinusoidal views of the world. But there the sophistication ends: the clip art is little more than a load of flat national border outlines. You can buy this

WHICH CLIP ART FORMAT?

Clip art includes images created in *vector* graphics packages like *Adobe Illustrator*, and freehand artwork created with a variety of *bitmap* paint programs – two different file types, so if you intend to edit the images, you need the appropriate software. Some vector packages enable you to import bitmap file format and vice versa – you can place bitmaps in *Illustrator* and *FreeHand*, and *Photoshop* will render vectors – but placed images remain uneditable in their original format. Listed here are the file formats you're likely to come across. Check (or ask your supplier) if your current software setup can open them.

■ **TIFF** – bitmap. Tagged Image File Format, a wonderful bitmap format that can be shared with PCs and has optional built-in LZW data compression. Can be mono, greyscale or full 24-bit CMYK or RGB colour. Being cross-platform, it's as standard as a standard can be, and few programs fail to support it. Mono TIFFs can have transparent backgrounds for special treatment in DTP programs. Although some clever programs offer better alternatives to the LZW compression, TIFF images guarantee that you should have no problems.

■ **PICT** – bitmap. The fundamental Mac bitmap format. Although the current version of PICT supports millions of colours, it's designed specifically for displaying on-screen images – in other words, RGB format only. If you want to print a PICT image as four-colour separations, you need to convert it in an image editor or use a top-end DTP program that handles CMYK separation on the fly.

■ **EPS** – vector. Encapsulated PostScript is a vector graphics format designed for exporting independently to other programs, especially DTP packages. The image is made up of anchor points on an X/Y axis, with a bounding box around the outside edges. Information is stored as to how these points are connected with lines and curves, and how closed objects are filled with colours and textures, which means EPS graphics can be blown up in size indefinitely without losing detail or going jaggy. When you see 'PostScript format' written on a clip art box, it means the widely supported *Illustrator 3.0* vector EPS format.

■ **EPS** – bitmap. Bitmaps can also be saved as Encapsulated PostScript for exporting. Bitmap EPSs as mono, greyscale, RGB and CMYK can be opened by some of the big bitmap image editors, but not all. You can, however, import bitmap EPSs into DTP and presentation programs on Macs and PCs, so publishers of clip art aimed at both formats often use this format. Bitmap EPS supports clipping paths for defining cut-outs and transparent backgrounds, but few programs support this feature yet, so even fewer clip art libraries bother with it.

■ **PC formats.** If you have System 7.5 or a copy of something like *DOS Mounter*, you can use clip art libraries designed for PCs only. Armed with an image conversion program like *Graphic Converter*, you can open files in bitmap formats like CGM, WMF, TGA and PIC, and resave them in a more appropriate Mac format. *Photoshop* opens BMPs (the PC equivalent of PICT) and PCXs without a twitch. A popular PC format is CompuServe's multi-platform GIF, which has built-in compression, but its 256-colour limitation makes it inappropriate in the Mac arena. Any vector EPS files you'll find are invariably in Mac-compatible *Illustrator 3.0* format.

kind of clip art cheaper anywhere, and with a better UK focus, although the special price deal on both *USA* and *World* libraries is worth considering.

MAPART DESIGNER

Disk format: 3.5-inch disks or CD-ROM
No of images: USA 105, World 138
Image formats: EPS vector
Price: $129 each or $199 for both
Contact: Cartesia Software on 00 1 609 397 1611

MACFORMAT RATING 75%

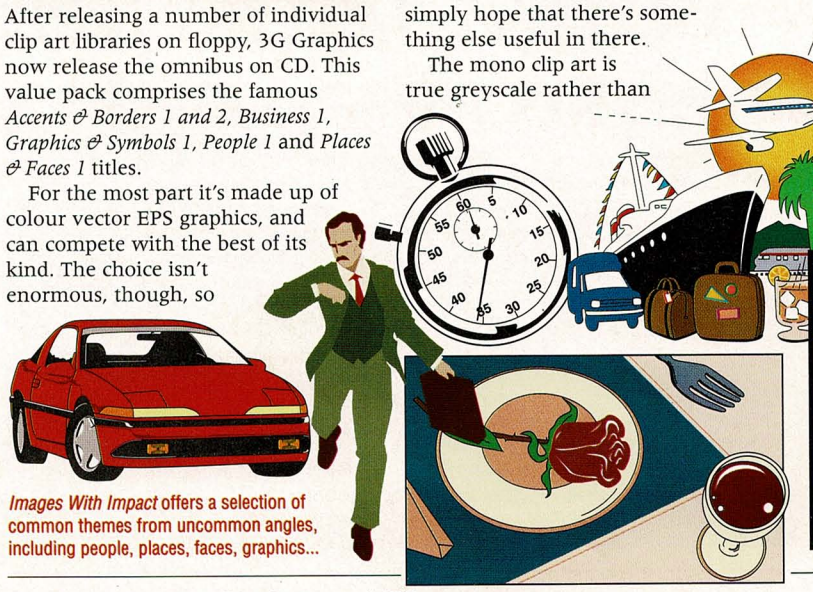
IMAGES WITH IMPACT

After releasing a number of individual clip art libraries on floppy, 3G Graphics now release the omnibus on CD. This value pack comprises the famous *Accents & Borders 1 and 2*, *Business 1*, *Graphics & Symbols 1*, *People 1* and *Places & Faces 1* titles.

For the most part it's made up of colour vector EPS graphics, and can compete with the best of its kind. The choice isn't enormous, though, so you might like to get hold of a sampler or preview of the content before you actually buy. It's one thing to buy a single *Business* pack, but quite another to buy a whole CD-ROM and simply hope that there's something else useful in there.

The mono clip art is just black and white, with fully editable paths for colouring in a vector graphics package. The *People 1* set isn't full of the usual stereotypical 1960s remnants, but includes some common themes from uncommon angles, and a highly unusual library of industry icons that you won't encounter anywhere else.

Accents & Borders requires imagination to apply – it's easy to see how you might use leaves and flowers to create a border around a box or even an entire page, but how are you supposed to use the fish? It's really just a jumble of non-classifiable items, but nicely drawn all the same.



Images With Impact offers a selection of common themes from uncommon angles, including people, places, faces, graphics...

IMAGES WITH IMPACT

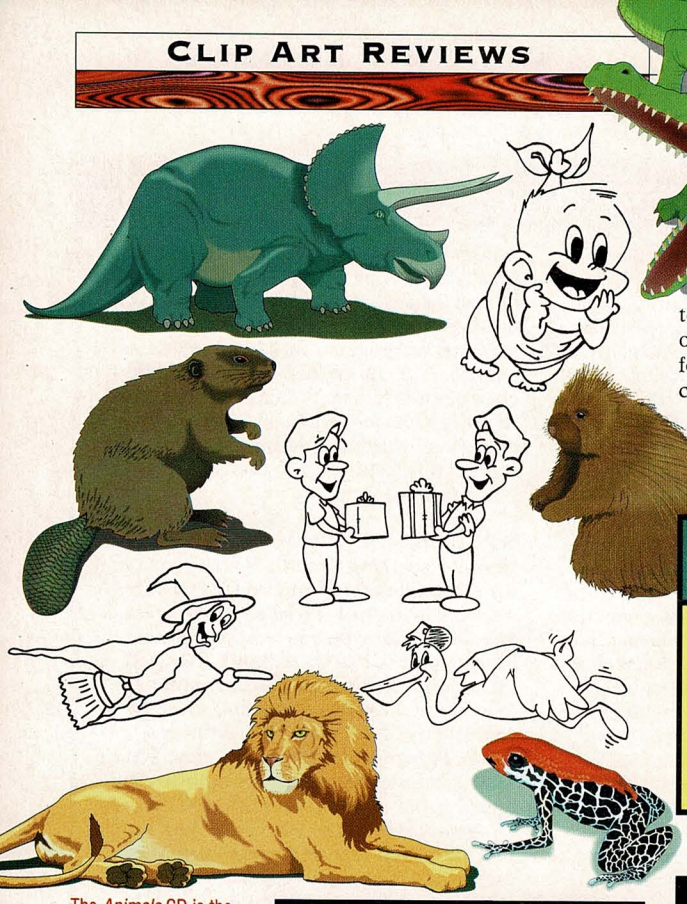
Disk format: CD-ROM
No of images: 1,700
Image formats: PICT, EPS vector
Price: £410
Contact: Softline on 0181 401 1234

MACFORMAT RATING 75%

ADD DEPTH

Clip art texture images are designed to be tiled (fitted together seamlessly), which makes them excellent backgrounds. Since many texture tiles are now based on photographs, they can add real depth to your artwork.

Continued on next page



The *Animals* CD is the surprise of *VCI Clip Art*, offering slick, accurate vector EPSs.

VCI CLIP ART

VCI Software publish a small range of themed CD-ROMs, mostly targeted at home Mac users – for example, one CD (well, 85Mb of it) is devoted to special occasions: birthday greetings and party invites. The one exception is the *Business Clip Art* CD.

Like many libraries, the VCI range has PC and Macintosh versions of the clip art on one CD. Some of the CDs also offer the same clip art in both vector and bitmap format – a nice touch, giving even the most poorly equipped home user a crack at the clip art editing whip. The *Special Occasions* CD offers the largest number of images, at 215, but unfortunately in black and white only. The *Animals* CD is a nice surprise, offering slick vector EPS graphics of detailed and proportionally correct domestic pets and beasts of the wild. It's well-suited to school projects and animal-specific organisations, but who else is going to fork out for over 100 pictures of camels, canaries and cats? An avid animal-fancier, I guess.

Still, the art itself is good and the packaging minimal to help keep the cost down.

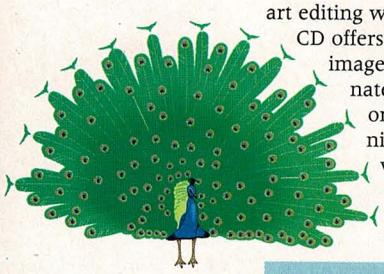
VCI CLIP ART

Disk format: CD-ROM
No of images: 95 to 215 per CD
Image formats: TIFF, GIF, EPS vector
Price: £14.99 each
Contact: VCI Software on 01923 255558

MACFORMAT RATING 70%

MAKE AN EFFORT!

Vector clip art tends to be flat. It doesn't take ten minutes to open a graphic up in *Illustrator* or *FreeHand*, apply some blends and alter the orientation or perspective, then re-save. Now your clip art is enhanced and unique.



THAT'S HANDY

EPS vector and bitmap TIFF images incorporate a clipping path around the boundaries of the graphic, as if it were a cut-out. This means you can add a background within your DTP package and it'll show through. Mono bitmap TIFFs can also be coloured and shaded directly from within some DTP packages, such as *QuarkXPress*.

GRAPHIC AIDS

If you don't appreciate wading through five tons of rubbish when you're only after one or two types of illustration, take a look at *Graphic Aids*, a series of 249 mini clip art libraries on floppy disk. Although it includes as many subject areas as disks, the images are all mono and mostly consist of cartoons, with the rest aimed at serious business and retail. The cartoons are broken up by subject and artist, so if you don't like a certain artist's work, you can safely avoid it – which is just as well, since the artistic quality varies widely. Order the sampler disk and you receive a printed catalogue, enabling you to view the full range of images and order by the disk.

With Translatum's background in commercial printing, you've probably seen many of the business images in the press: their line in car clip art has graced many a garage advert in local newspapers. And although all the images are bitmap TIFFs, they have all been scanned in at high resolution from paper originals. Unfortunately, for the same cost as Corel's 15,000 images, you can only buy three floppies' worth from the *Graphic Aids* range. **MF**

If you're looking for clip art on a specific theme, try *Graphic Aids'* floppy-based catalogue.

GRAPHIC AIDS

Disk format: 3.5-inch floppy
No of images: 10 to 20 per floppy
Image formats: TIFF
Price: £24 each
Contact: Translatum International on 01352 710276

MACFORMAT RATING 65%

HOW CAN YOU SEE WHAT YOU'RE GETTING?

Some publishers supply a printed manual as reference, with file names marked by each image, while others include a small image browser program, possibly with drag-and-drop capabilities enabling you to dump artwork straight into other programs.

You're don't have to use these free browsers and manuals. Clip art is in standard file formats, so you can pull it directly into your graphics or DTP program. But you don't want to open each file in turn until you find the one you want, and if you make use of several clip art libraries from different publishers, the quirks of one browser may not suit the way you want to work with images from another library.

Corel have made an attempt to provide an all-encompassing image manager within *Corel Gallery*. Here you can build up your own library folders and lists, based on images on other CDs and disks. It's a handy solution, but if you want a system of instant floating thumbnails of any clip art, try a third party solution, such as Imspace's *Kudo* (£210 from Magnum on 01884 820240). This has an easy-to-use interface comprising a single window of thumbnails, each with a miniature icon indicating file type and creator, plus the file name. You can access further file information, such as size and location on your hard disk, without leaving the *Kudo* window. It supports System 7 drag and drop, and you can save views as standalone programs, but you'd have to be using serious amounts of clip art to warrant the cost.

You may own an image browser already. If you have *Adobe PageMaker*, you probably have a copy of the sorely underrated *Fetch* to hand. Otherwise, there are plenty of cheap shareware image browsers ready for download from eWorld, CompuServe, CIX and across the Internet.

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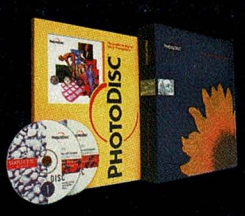

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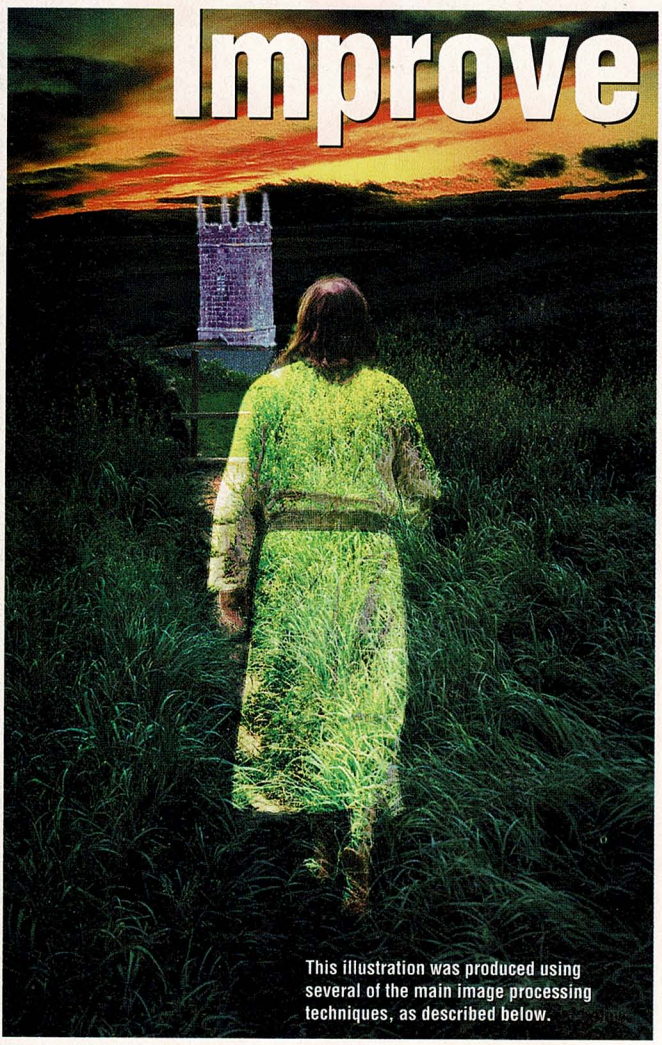


This illustration was produced using several of the main image processing techniques, as described below.

Improve your image

You don't need cosmetic surgery to get rid of those wrinkles or have a nose job. Use the latest image processing packages instead. Brian Larkman shows you how.

In an ideal world every photograph you took would be perfectly exposed and framed, every line perfectly drawn, every 3D model perfectly rendered.

In the real world this seldom happens when you're actually creating your images. Image processing enables you to go back and improve or correct your artwork. In fact, image processing has now overtaken mere paint programs as the preferred digital paint box for most artists and designers.

This series will show you what image processing is and what you can use it for – improving artwork, creating new images, or mixing several images together. We're going to cover how to master the basics, then move on to the advanced tools.

Correction

You'd need to be God to take the ideal photo, and even He took a week to get the exposure right. Common faults you might want to correct include under- or over-exposure, colour cast, poor focus and camera shake, poor framing of the subject, dirt and scratches on the lens or the scanner, shiny noses and red-eye. These can be corrected fairly easily – though if you find all of these on the same scan, perhaps you should find a new hobby.

The Brightness and Contrast tools found in most image processing programs can correct exposure problems. But these can lose detail in light and dark areas – Levels and Curves, if available, are better. They enable you to push the tone of the mid-range colours without affecting the brightest and darkest tones as much, retaining shadow and highlight detail.

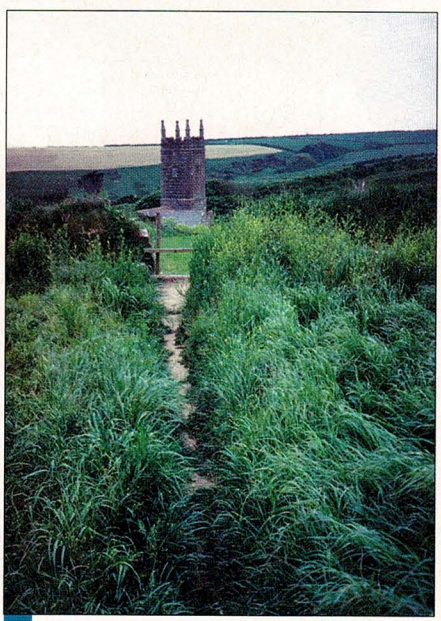
Removing a dominant colour or colour 'cast' should be an easy correction to make – you simply adjust the RGB sliders to correct it, surely? But it isn't that easy – highlights, mid-tones and shadows all react differently. There's more to it than that.

Poor focus in a photo, if it's not too extreme, can be fixed using a sharpen-

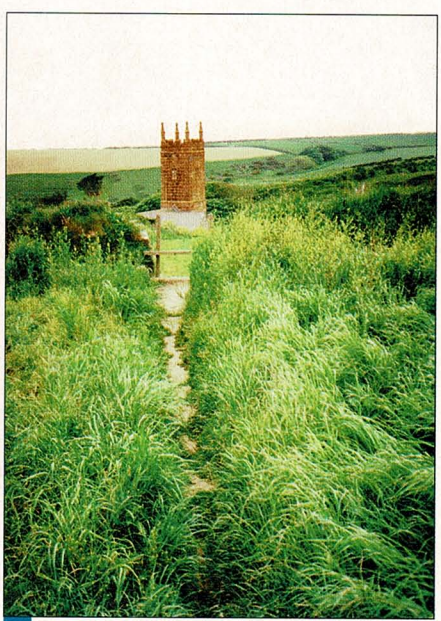
NOW TRY IT YOURSELF

Sharpen your scalpel, it's time to operate. Don't worry, image editing seldom gets gory.

1 Original view
The starting point for the illustration is this PhotoCD image, taken by Paul Devereux. Notice the modern power-cables and houses, the dull sky, and the lack of depth resulting from the PhotoCD scanning process. All of these need to be removed before the image can be used.



2 View transformed (correction)
A number of correction tools were used on this image. The power lines, pole and modern buildings were removed using a 'stamp' tool, which copies adjacent pixels to cover the offending objects. The overall colour balance and brightness were improved using Levels and Curves. Brightness and Contrast sliders would have given a similar result, but some detail would have been lost.



3 View given false colour
The idea of this illustration is to show St Leven walking toward his church in Cornwall. According to legend, as he walked the grass sprouted in his footsteps. To give an impression of this, a summer-like version of the view was created, using *Photoshop*'s Image/Variations dialogue to superimpose his figure on the scene as a semi-transparent overlay.

SOFTWARE

There are so many image processing, plug-in special effects and warping programs available for the Mac that we couldn't possibly cover them all. The industry standard image processing package is Adobe *Photoshop*, which is now up to version 3.0. We'll be using this throughout the series as the base to measure all packages and facilities by, but it is very expensive and many people have no access to it. As a comparison, we will use two cheap but effective packages that provide most of the functions of *Photoshop*: MicroFrontier's *Color It!* and *PhotoFix*.

ing tool – most programs have several – but the best results come from more sophisticated tools such as Unsharp Masking and Convolution. The latter is the only tool that can do anything about camera shake, although you could drink less and buy a tripod!

Poor framing needs a quick crop. Dirt and scratches need the services of a Stamp tool or a Blemish filter. And as for shiny noses, pimples, wrinkles and red-eye, these need a little touching up with a Paint tool in darken or colorise mode – failing that, some urgent attention from a beautician.

Selection and Montage

One of the joys of image processing is how easily you can make your camera tell lies. Careful massaging of the truth has gone on in photography since before Molotov was removed from Lenin's 'family' snaps. Any number of images can be seamlessly composited together, using varying degrees of transparency and edge softening.

The tools you use to carry out these small miracles are available in most image processing programs, but *Photoshop* is the leader of the pack. It offers excellent selection methods, multiple channels, several masking systems and layers. Although all these are similar, each technique displays the chosen area differently, and enables you to produce a diverse range of effects.

Selecting an area places marching ants around it – you can then cut or copy, paint or otherwise act upon that part, independent of the rest of the image. Masking defines a selected area as a semi-transparent colour that can be thickened or thinned, extended or erased with normal paint tools. This enables you to apply semi-transparent or soft effects.

Channels show each selected or masked area as a separate greyscale image, which you can paint on or paste another greyscale image into. Each channel is independent, so you can save selections and masks to use later, or apply them to other images.

Layers are parts of an image that you have selected which float permanently above the surface like layers in a real montage. They can almost be treated like separate images.

You can cut and paste selected areas or objects in the usual way. They can be pasted into or behind other selections or layers, or blended into the image using various modes. *Photoshop* has the biggest range of selection methods, but each program featured in this series has its own strengths. Other such software provides even more powerful specialist tools.

Special effects and Plug-ins

Once image processing became accessible to everyone, tools that were designed for specific sensible purposes were bound to be abused. Youth of today, eh? Give them a handy technical tool and they have to go and be subversive. Contrast and Brightness are particularly rewarding, especially if you apply them to a soft selection. For example, the Gamma curve in *Photoshop* can give interesting negative, solarised and false colour effects with controllable ease. Repeatedly blurring and/or sharpening an area creates a feeling of depth and mystery. *Photoshop*'s Distort, Noise, Render and Stylise filters produce fascinating effects, and some of them work in *Color It!* and *PhotoFix*. Just try everything.

Adobe have encouraged this sort of deviant behaviour by giving *Photoshop* a plug-in architecture, which everyone else has copied. There's now a whole rash of products that run as parasites to the main programs. *Kai's Power Tools* and *KPT Convolver*, for instance, come with a free copy of MicroFrontier's *Color It!*, which means you don't need to invest a fortune in *Photoshop* to use them. Many other plug-ins are available: commercial products like Xaos *Paint Alchemy 2.0* and *Andromeda 1 & 2*,

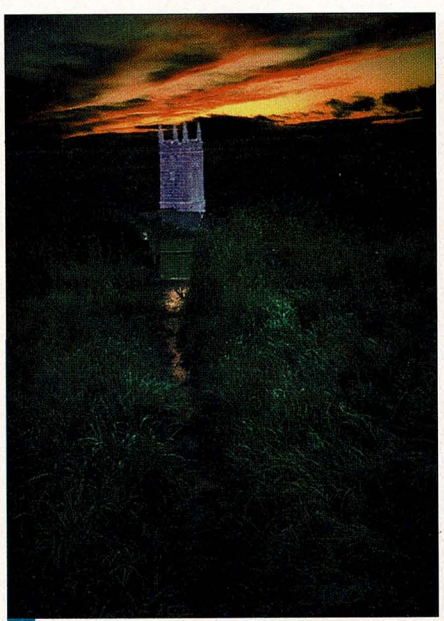
GAMMA CORRECTION CURVE

A line graph showing a representation of the full range of brightness values of an image. The line can be curved at will, enabling a huge range of effects to be applied to the image – see the feature in MACFORMAT 28.

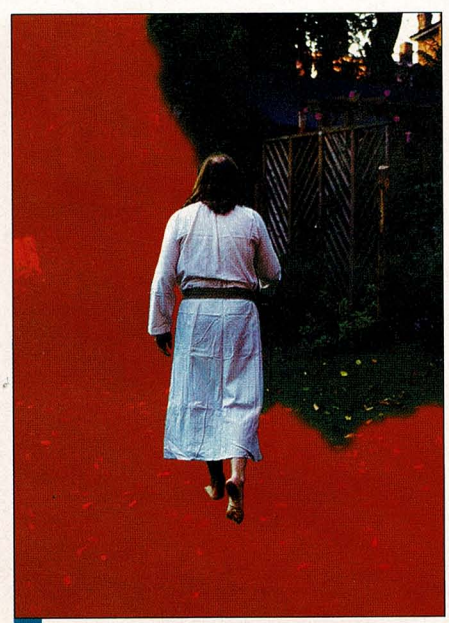
PHOTO-MONTAGE AND COMPOSITING

A montage is a group of objects placed together in an artistic arrangement to make an image of some kind. A photo-montage is a group of photos arranged or composited to create an image, often an illusion. A classic example is Steven Caplin's Camera Obscura cartoon, in *The Guardian*.

Continued on next page



4 Finished view
To make the summer colours of the figure stand out, the view was made to look more wintry, using Variations and Curves. The dull sky was replaced with a more colourful version. The new sky image was loaded, the size adjusted, then all selected and copied to the clipboard. The original sky area was then selected using the Magic Wand tool, and the new sky pasted inside the selection.



5 Original figure
The figure was taken from a specially posed photograph. The background was rather intrusive, so the Quickmask system in *Photoshop* was used to paint a mask around the figure so that it could be cut out and copied to the clipboard, ready to be pasted straight into the main illustration.

6 KPT Texture Explorer
The figure could have been transformed in many ways using various plug-ins. Here a surface texture has been designed using *Kai's Power Tools* Texture Explorer, then applied using the Procedural Shading method to retain the figure's contours. The figure was placed into a transparency channel and used to select part of the summer background for pasting onto the final illustration.

PLUG-IN

Some developers have provided a plug-in architecture to their programs so that third party software writers can add extra functions and tools to standard software. There's a huge review of plug-ins in MACFORMAT 27.

RESOLUTION

This defines how much detail you can see in an image. Most paint programs use a grid of square dots, called pixels. Detail is measured in terms of dots per inch (dpi). How much colour/detail the pixels show defines the resolution. The number of colours shown is measured in multiples of two, called bits, so 4-bit = 2 x 2 x 2 x 2 =16 colours.

UNSHARP MASK

Most programs provide a simple one-off Sharpen tool, but Unsharp Masking is a much more accurate and controllable method for removing blurring, if you can get it.

and shareware products like *Pete's Plug-ins* and the bizarrely-named *Sucking Fish* Filters. Most of these will be described in this series, and we covered many of them in our Plug-ins feature in MACFORMAT 27.

Although *Photoshop's* image effects tools and Distort filters enable lots of interesting distortions of your images, none of them push the pixels around in such a controllable way as Valis's *Flo*. You can widen someone's smile to their ears or their head to their shoulder pads, with a smooth transition between the Flo'd and unFlo'd areas. *Elastic Reality* can do similar things but is more difficult to use and costs more.

Output

Many file formats have evolved for graphic images, so a good image processing system needs to be able to read and write as many as possible. You can use image processing programs to convert file formats. Ideally, the file you bring in should be at the colour and dot resolution you need for the final image, but, as this rarely occurs, your image processor should be able to change the resolution and canvas size easily. This is more than a case of enlarging or reducing pixel size: any size change should be carried out intelligently, using a degree of pixel smoothing and anti-aliasing when you enlarge your picture, or over-sampling if you're reducing.

You should also consider where you plan to use your image. If it's for a low resolution display or the small window of a multimedia presentation, then detail is not as important as file size. 256 colours (8-bit) uses less memory than 16-bit colour, but choose your palette carefully. Compression saves space but increases the loading time for files if you get it wrong – this is particularly important if you're producing an animation or video sequence.

If you're working on images for print in magazines and books, the resolution needs to be much higher, though not always as high as you think. For display transparencies and large prints the sky is the limit, and you need huge storage space, RAM and display acceleration.

You must also bear in mind the variation in colour between the screen display and your print-out. Normally you work with the red, green and blue (RGB) colour space that computer monitors use for their display, which can display most of the visible spectrum of light. When you print your image, you must usually convert it to the cyan, magenta, yellow and black (CMYK) system that most printers use. This has a much smaller colour space or 'gamut' than RGB, and as a result many colours are not printed correctly. Some programs enable you to preview your image in CMYK mode or even work that way, though they're usually slow and offer limited effects.

Preparing your work for printing (pre-press) is still an arcane art, and the few people who have sussed it out won't give you any tips if they can help it. Good image processing systems will hold your hand a lot of the way, though – doing the separations for you, and even allowing for the spread of the ink during printing.

If your work is destined for video, RGB is the correct mode, but even then the colours may be wrong. Most image processing programs desaturate the overall colour balance to avoid video colour bleed problems. **MF**

Where to go

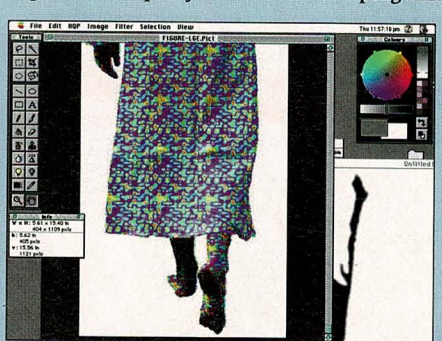
- Adobe *Photoshop 3.0* costs £851.88. For more details contact Principal on 01706 832000.
- *Andromeda Series 2* filters cost £97.83. For more details contact Principal on 01706 832000.
- *Color It!* costs $164.95 (inc p&p) – but also comes free with *Kai's Power Tools*. For more details contact Principal on 01706 832000.
- *Elastic Reality* costs £292.57. For more details contact Softline on 0181 401 1234.
- *Flo* costs £165. For more details contact Letraset on 0171 928 3411
- *Kai's Power Tools* costs £175.08. For more details contact Principal on 01706 832000.
- *KPT Convolver* costs £178.60. For more details contact Principal on 01706 832000.
- *PhotoFix* costs £175.08 with full CMYK (special offer price, usually £233.83) and £116.33 for the RGB version. For more details contact Linographic on 01252 376103.
- Xaos *Paint Alchemy 2.0* costs £135.13. For more details contact MacLine on 0181 401 1111.

INTERFACES

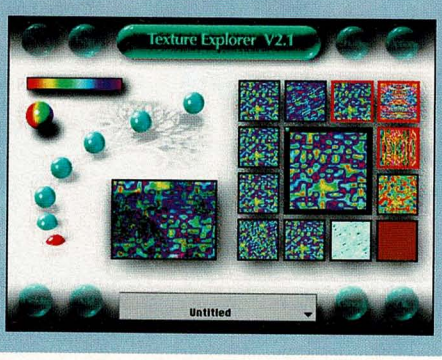
You'll see this when you open up *Photoshop*, *Color It!* or *PhotoFix* – for go-faster stripes, just add some *KPT* plug-ins.

***Photoshop* interface**
The *Photoshop* interface is perhaps the best graphics interface designed for the desktop computer. This screen grab shows some its most frequently used tools, brush shapes, colours, layers and channels, and palettes.

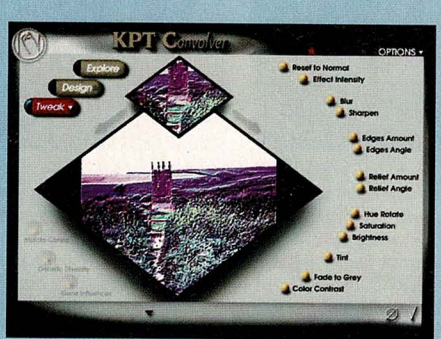
***Color It!* interface**
The *Color It!* interface, though not as sophisticated as *Photoshop's*, has some great tricks of its own. The best of these is the customisable tool palette. Once you've set up a particular layout, you can save and call it up again later.



***PhotoFix* interface**
The *PhotoFix* interface is based on *Photoshop*, but with a few extras such as a rotate tool added on. Like *Color It!*, *PhotoFix* has fewer facilities than *Photoshop*, but you can add plug-ins to overcome many of its shortcomings.



***Kai's Power Tools* interface**
The arrival of *Kai's Power Tools* – the most comprehensive set of *Photoshop* plug-ins you can get – started a revolution in Macintosh program interfaces. Each of the four main tools follows a similar layout and operating philosophy, placing maximum emphasis on ease of use and lack of clutter.



***KPT Convolver* interface**
The latest of *Kai's Power Tools* enables you to create your own filters by making *Photoshop's* Custom filter easy to understand and use. Based on the basic convolution engine, it also enables you to judge every operation exactly by 'bracketing' – giving previews for several settings on either side of the one currently chosen.

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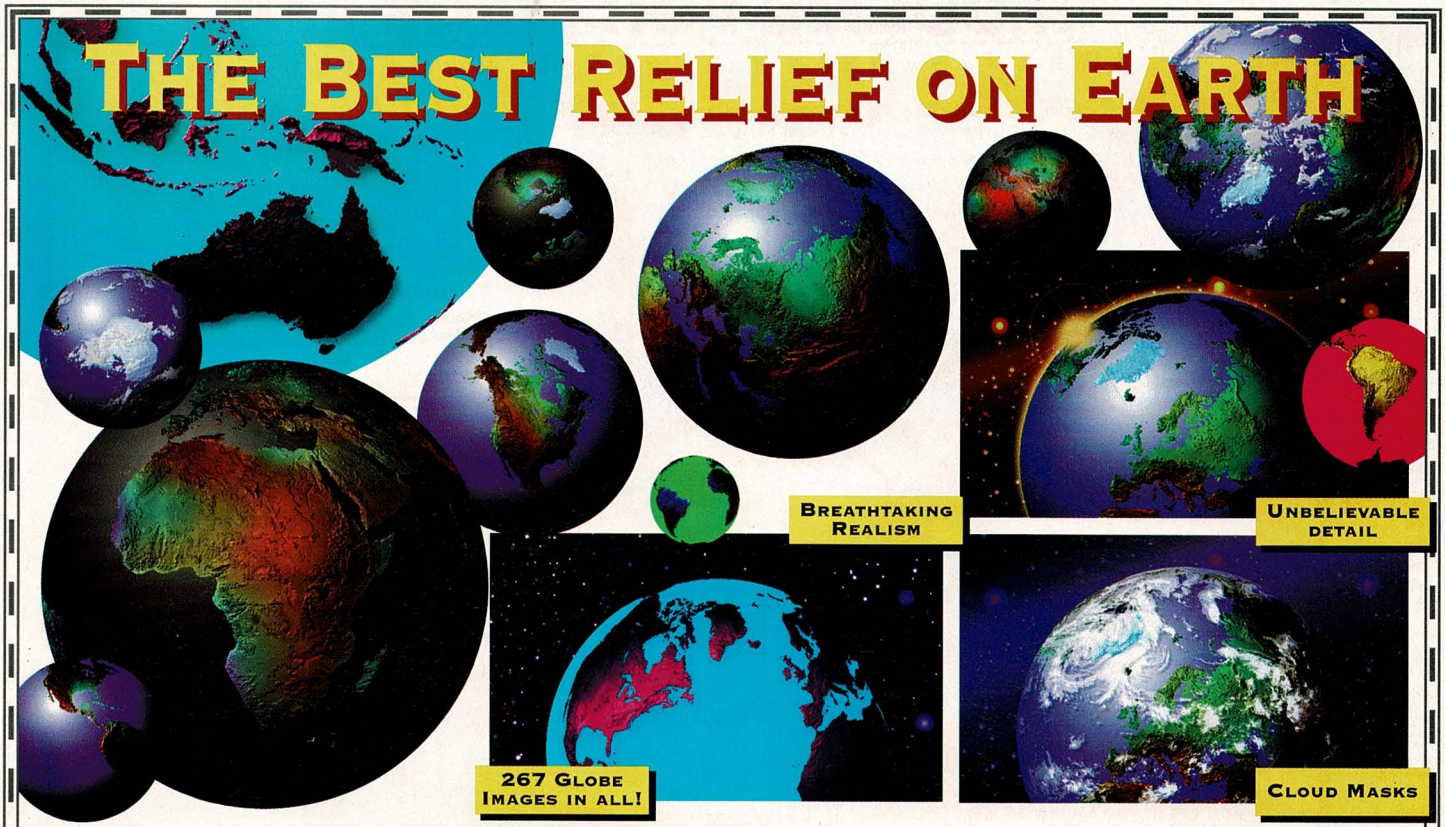

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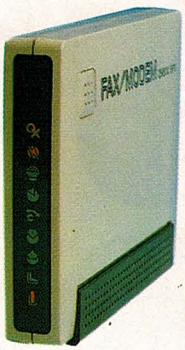

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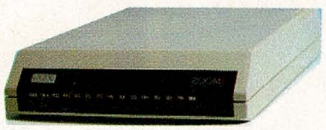

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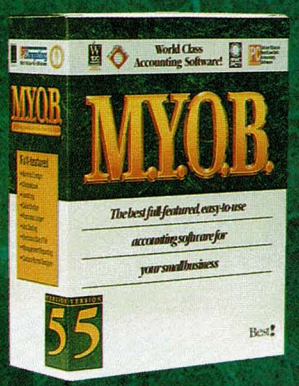

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E-mail made e-asy

E-mail is the main form of communication on the Internet. Richard Hill looks at electronic messages in part three of MACFORMAT's in-depth series on the Net.

Try e-mail with *Eudora* on this month's CD-ROM

No function of the Internet is used as heavily as e-mail. It's a simple way to send messages to anyone else who has an e-mail address, and receive messages back. Sending an e-mail is quicker than writing a letter – your note can reach a friend in California within a few minutes – and it costs the same to send a message whether the recipient lives in San Francisco or Scunthorpe.

To access any part of the Net, including e-mail, you need a modem, which enables your Mac to use a phone line to get connected (see last issue for more details). If you have an account with a service provider to get access to the Net, this almost certainly includes a facility to use e-mail. You should also have been given e-mail software as part of your subscription, but if you don't like the program you've got, there are plenty of others on File Transfer Protocol sites (for more about FTP see MACFORMAT 27).

All you then need is your own address. Your service provider usually creates one for you as part of your subscription fee. Take a look at the 'Anatomy of an address' box below to see what's behind an e-mail address.

Yellow pages

You need to know someone else's address if you're to send a message to them. While the e-mail equivalent of a telephone directory hasn't been published, it's not too difficult to find someone's address. You could just phone 'em up and ask, for a start! More companies are publishing e-mail addresses in adverts and brochures, or giving them on business cards. And addresses appear on other parts of the Net – the World Wide Web and newsgroups, for example – all the time.

While it has some of the spontaneity of using the phone, e-mail is also reviving the polite art of letter-writing, which means there are some dos and don'ts. Always make sure you're sending your missive to the right person. Remember they have to spend money

Continued on next page

ANATOMY OF AN ADDRESS

Most e-mail addresses follow the same basic rules. Here's what the parts of MACFORMAT's address mean:

The short codename that the person or organisation you're e-mailing has chosen.

The break point between the name and the address.

After the server name, you often see an abbreviation that show what type of server it is – 'co' tells you that the FutureNet server is owned by a commercial organisation.

The name of the server you're sending your message to. A server is a computer that stores the messages ready to be picked up. Your own address probably has the name of your provider's server here.

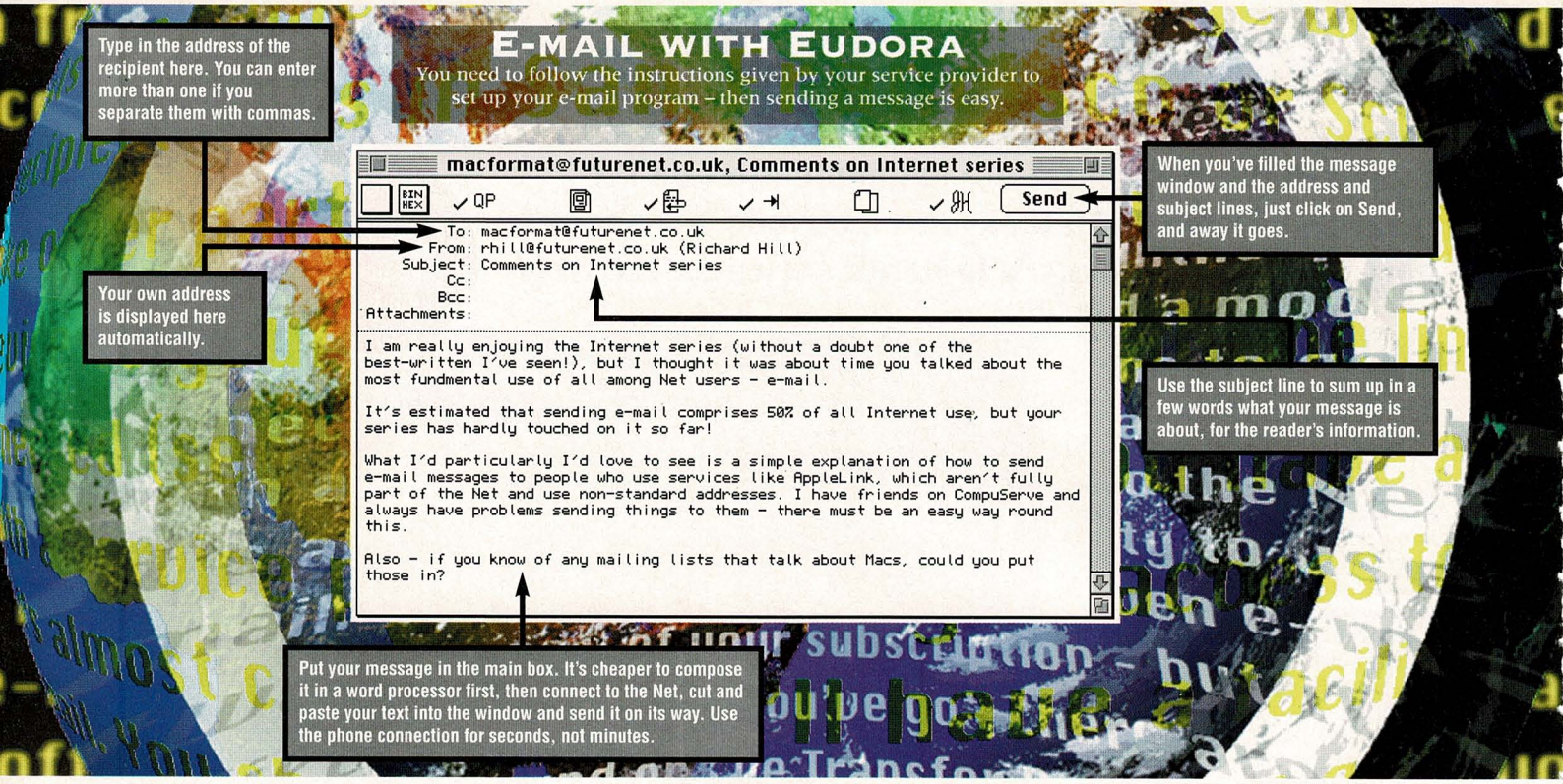
macformat@futurenet.co.uk

And at the end you often find an indication of the country the server is based in. Sometimes the last two codes are replaced by a single code that indicates solely what kind of organisation owns the server.

Types of organisation		Countries of origin				
com Commercial firm	gov Government body	au Australia	ca Canada	es Spain	ie Ireland	nt The Netherlands
edu School or college	net Net-related firm or body	be Belgium	ch Switzerland	fi Finland	it Italy	no Norway
	org General organisation		de Germany	fr France	jp Japan	se Sweden

PREVIOUSLY...

Part one of this series (MACFORMAT 27) introduced the main ideas and areas of the Internet. And last issue, part two looked at modems and the companies that give you a line onto the Net.


E-MAIL WITH EUDORA
You need to follow the instructions given by your service provider to set up your e-mail program – then sending a message is easy.
Type in the address of the recipient here. You can enter more than one if you separate them with commas.
Your own address is displayed here automatically.
When you've filled the message window and the address and subject lines, just click on Send, and away it goes.
Use the subject line to sum up in a few words what your message is about, for the reader's information.
Put your message in the main box. It's cheaper to compose it in a word processor first, then connect to the Net, cut and paste your text into the window and send it on its way. Use the phone connection for seconds, not minutes.
macformat@futurenet.co.uk, Comments on Internet series
Send
To: macformat@futurenet.co.uk
From: rhill@futurenet.co.uk (Richard Hill)
Subject: Comments on Internet series
Cc:
Bcc:
Attachments:
I am really enjoying the Internet series (without a doubt one of the best-written I've seen!), but I thought it was about time you talked about the most fundmental use of all among Net users - e-mail.
It's estimated that sending e-mail comprises 50% of all Internet use, but your series has hardly touched on it so far!
What I'd particularly I'd love to see is a simple explanation of how to send e-mail messages to people who use services like AppleLink, which aren't fully part of the Net and use non-standard addresses. I have friends on CompuServe and always have problems sending things to them - there must be an easy way round this.
Also - if you know of any mailing lists that talk about Macs, could you put those in?

getting it from their service provider, so be succinct. And DON'T USE CAPITALS. THEY'RE DIFFICULT TO READ.

Getting through

One of the problems that crops up with e-mail is sending messages to places that aren't formally part of the Internet. Services like CompuServe and eWorld either used to be, or remain, separate from the rest of the Net. While they have mail systems for their users to write to each other, the addresses can take different forms. For example, AppleLink users can write to us at the address **MacFormat** – nothing else needed. But if you're not on AppleLink, how do you reach us? The answer – for CompuServe and some other on-line services – is in the 'To and fro' box just to the right.

Mailing lists are an example of what else you can do with e-mail. These are discussion groups you can join, and there's at least one on every subject under the sun. All you have to do is subscribe – you then receive regular mailings sent direct to your address. To subscribe to these lists you need the right address – and there are computers dotted around the world that you can write to subscribe. One is at the address **listserv@listserv.net**. To get a list of the groups and instructions on how to do it, send this message:

LISTS GLOBAL

Don't put any further text in the message or your subject line – you'll muck up the software. Soon afterwards you'll receive a file giving the names of hundreds of mailing lists. These directories take some time to get onto your Mac, but if you find the group for you, it's money well spent! **MF**

NEXT ISSUE...

...It's DIY time! Take a look at what's happening on the World Wide Web, then make your own pages with MACFORMAT's help.

E-MAIL US!

We love to read your opinions and suggestions for MACFORMAT, which you should send to **macformat@futurenet.co.uk**. Sorry, but we're just too busy to reply to each message.

TO AND FRO

If you know the address of someone on one of these services, you can easily adapt it to send them a message.

	From Internet to Service Replace **[name]** with the recipient's user name.	From Service to Internet Replace **[address]** with the recipient's full Net address.
America On-Line	**[name]@aol.com** Name must be in lower case with no spaces.	**[address]**
AppleLink	**[name]@applelink.apple.com**	**[address]@internet#**
CIX	**[name]@cix.compulink.co.uk**	**[address]**
CompuServe	CompuServe user names take the form of a numerical sequence – **12345,6789** for example. Replace the comma with a full stop and e-mail to **[name]@compuserve.com**	**INTERNET:[address]**
eWorld	**[name]@eworld.com**	**[address]**

MAC MAILING LISTS

You can subscribe to any of these discussion groups by sending an e-mail to **listserv@listserv.net**
Make sure you don't fill in the subject line or include any other text apart from the following:

SUBSCRIBE [MAILING LIST NAME] [Your real name]

You should put your own name at the end as a courtesy to the the list organisers. If you want to quit the list, send another message to the **Listserv** address (NOT the individual group's address):

SIGNOFF [MAILING LIST NAME]

Name	Group address	Description
H-MAC	**h-mac@msu.edu**	H-Net list for the History and Macintosh Society
INFO-MAC	**info-mac@cearn.cern.ch**	Info-Mac Digest
MACAPPLI	**macappli@listserv.dartmouth.edu**	Usage tips about Macintosh applications
MACCHAT	**macchat@vm.temple.edu**	Mac*Chat newsletter
MACMULTI	**macmulti@fccj.bitnet**	Macintosh multimedia discussion list
MACPPC-L	**macppc-l@yalevm.cis.yale.edu**	Macintosh PowerPC list
MACSYSTM	**macsystm@listserv.dartmouth.edu**	Macintosh system software
TIDBITS	**tidbits@ricevm1.rice.edu**	TidBITS – a newsletter for Mac users

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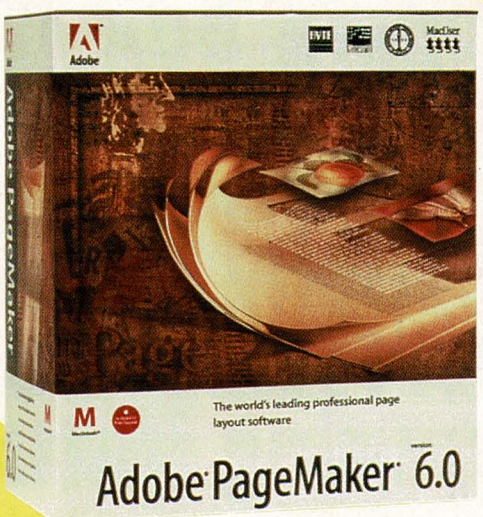

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From the makers of .net the internet magazine

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Sex
Newsgroup Confessions
Drugs
Star Trek Rogues Gallery
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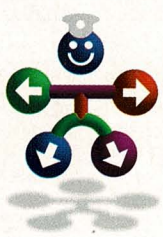
You need a guide.

You need *the* guide...



The .net Directory.

Thursday, 27th July
http://www.futurenet.co.uk/index.html

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Money Matters

Analyse your monthly outgoings using *ClarisWorks*. Rod Lawton shows you how to plan your spreadsheet and move cell contents around.

Last issue in MACFORMAT we showed you how to set up your own spreadsheet. This month we're going to show you how to plan its layout, then how to move data and formulae around. In the walkthrough over the page we show you how to set up a *ClarisWorks* spreadsheet that can track your regular expenses over a series of months – and discover how little money you really have!

Now, most people find this out the hard way, but planning out the structure of your spreadsheet before you start makes life easier – even if you just sketch out a grid on the back of an envelope. You can move data and formulae around once you've constructed your spreadsheet, but things can get complicated if you attempt to make any major structural changes.

Moving cells around

You've been advised to plan your spreadsheet before you start, but what if, halfway through designing it, you realise that you should have done it completely differently?

Fortunately, despite the complex links between cells, spreadsheets do give you a fair amount of editing flexibility. You can insert and delete whole rows or columns if you need to, as well as individual cells. You can also move the contents of a cell from one location to another, or copy them repeatedly with ease.

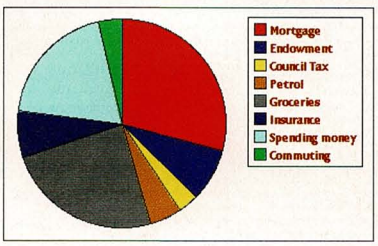
This is useful, because the spreadsheet in the walkthrough has a bit of a flaw. Currently, income (Salary) and expenses (Mortgage, Endowment and so on) are lumped together with one final total, and expenses have to be distinguished using a minus sign, which causes problems later on. If income and expenditure were separate, you could dispense with the

Continued on next page

A5 | Mortgage

	A	B	C
1	**Monthly accounts**		
2			
3	*Item*	*October 1995*	*November 1995*
4			
5	Mortgage	-£ 544.21	-£ 544.21
6	[illegible]	-£ 145.96	-£ 145.96
7	[illegible]	-£ 63.80	-£ 63.80
8	Petrol	-£ 90.00	-£ 90.00
9	[illegible]	-£ 450.00	-£ 450.00
10	[illegible]	-£ 136.70	-£ 136.70
11	[illegible]	-£ 360.00	-£ 360.00
12	[illegible]	-£ 66.40	-£ 66.40
13	Gas bill	-£ 96.50	

To select a cell range, simply drag from one corner diagonally to the opposite corner, then release the mouse button.



Once you've selected a cell range, you can carry out many actions. In this case we've converted the data into a pie chart showing how notional monthly expenditure breaks down.

FORMULAE AND LITERAL VALUES

Spreadsheets usually contain a mixture of literal numbers and formulae that act on these numbers, while a few cells contain text. Only cells that contain numbers can be manipulated by the formulae – text is usually included simply to make the output easier to understand.

It's not possible, just by looking at a cell, to tell whether the number displayed has been typed directly into that cell or is the result of a calculation that has been carried out by a formula. You have to actually click on the cell and see what is in the formula bar at the top to find out its contents. Take a look at the illustration below if this isn't quite clear – in each case, you can see the cell as it's displayed, and then what it shows in the formula bar when you click on the cell.

When it comes to formulae, different spreadsheets might use different characters, but all are based on the same theory. If you understand how to use a formula in one spreadsheet, you should be able to get it to work in another.

File Edit Formula Format Data Option

Normal | Σ | B I A

A3

Worksh

	A	B	C	D
1	13			
2	26			
3				

1 The two numbers have been typed in by clicking on the relevant cell and tapping in the numbers. Note that these appear in the formula bar at the top of the screen, and don't appear in the cell until you accept them (usually simply by clicking on another cell, or pressing **[Enter]**).

File Edit Formula Format Data Option

Normal | Σ | B I A

A2 | 26

Worksh

	A	B	C	D
1	13			
2	26			
3				

2 If you click on cell A2, you'll see that the content, the number 26, hasn't changed, and it's now displayed in the formula bar (the formula bar always displays the contents of the cell that's currently selected). This means the number 26 has been typed directly into the cell.

File Edit Formula Format Data Option

Normal | Σ | B I A

A3

Worksh

	A	B	C	D
1	13			
2	26			
3				

3 This looks the same as the picture above – there's no visible difference. However, in this case, the contents of cell A2 have been calculated by a formula using the contents of cell A1. But the only way you're going to find this out is by clicking on cell A2...

File Edit Formula Format Data Option

Normal | Σ | B I A

A2 | =A1*2

Worksh

	A	B	C	D
1	13			
2	26			
3				

4 ...and immediately the displayed contents change – the formula used to calculate the number is now visible in the formula bar. In case you were wondering, the value in cell A2 is double the value in A1. You can alter the formula by clicking in the formula bar and retyping.

FILLING IN TIME

If you need to copy the same data or formula into a whole series of cells, software with a 'fill' function can save you lots of time.

EASY SUMS

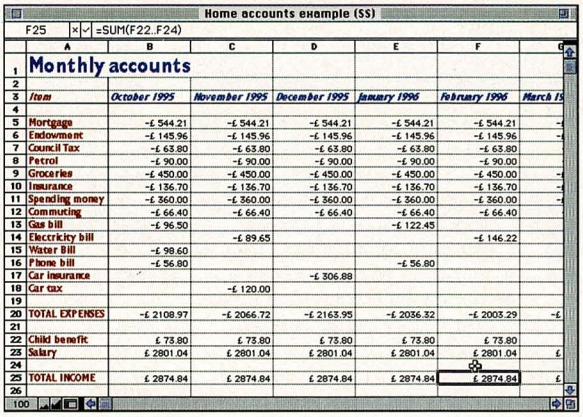
To total a series of cells in *ClarisWorks*, select the cells you want to total, making sure you include a blank cell at the end. Then simply click on the Σ icon on the shortcut palette.

minus signs and sub-total income and expenditure individually. That's no problem. In the walkthrough we used **Copy** and **Paste** to duplicate one month's expenses across the whole year. This time we're going to use **Cut** and **Paste** to move the data, but we're going to relocate whole rows, instead of just individual cells.

To select a row, click on the row heading to the left of the first column. Using **Cut** and **Paste,** we can move the Salary and Child Benefit rows to below the monthly total. Then we can delete the now-empty rows that they used to occupy. Our monthly total cell still works as it should, but now it only totals expenditure. We can also generate Total cells for monthly income.

Paste with care!

The **Paste** command in a spreadsheet doesn't work the way you're used to. Instead of inserting the pasted material in front of what's already there, it pastes on top of existing data or formulae. Before you paste anything in a spreadsheet, make sure you're pasting into a clear area large enough to take it.

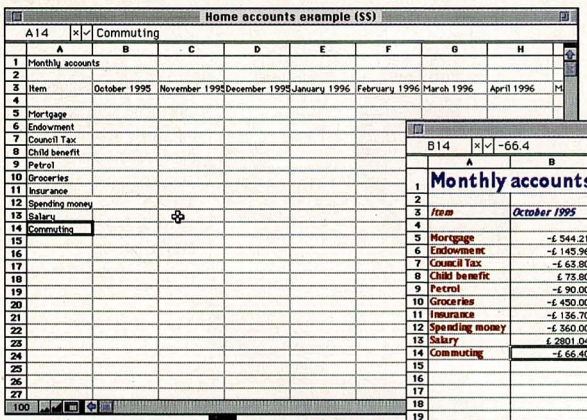


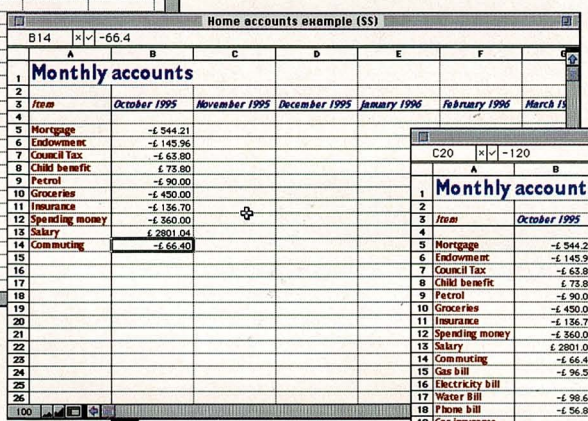
With a few **Cut** and **Paste** operations, you can reorganise your spreadsheet so that income and expenditure are separated and can be totalled separately.

What's a cell range?

Now you understand how to select and move an entire row at a time, you're partway to understanding the concept of cell ranges – where you can carry out operations on more than one cell at a time. You could, for example, select rectangular areas of cells in order to copy them, move them, change the type style, apply colours or even create a chart.

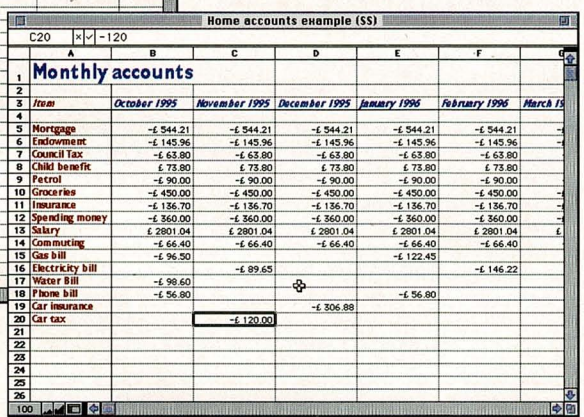
Selecting a range of cells is easy. Just drag diagonally, with the mouse button held down, from one corner of the range you want to select to the opposite corner. Release the mouse button, and you'll find the selected cell range is highlighted. You can now do various things with the highlighted area of cells. In this case, we've created a pie chart showing regular monthly expenditure broken down into individual items. If you try this out for yourself, remember that *ClarisWorks* won't produce a pie chart from negative values – you'll have to modify the spreadsheet so that expenditures are typed in as positive values, as we explained above. Good luck. **Rod Lawton**





1 Once you know what needs to be in your spreadsheet and the form it should take, you can create it on screen. Don't bother with entering any formulae or data yet – just concentrate on creating the framework. Once the basic structure's in place, you might want to think about formatting certain sets of cells. At this stage, all the cells that contain sums of money can be set to currency format, with figures either rounded up to pounds or including pence.

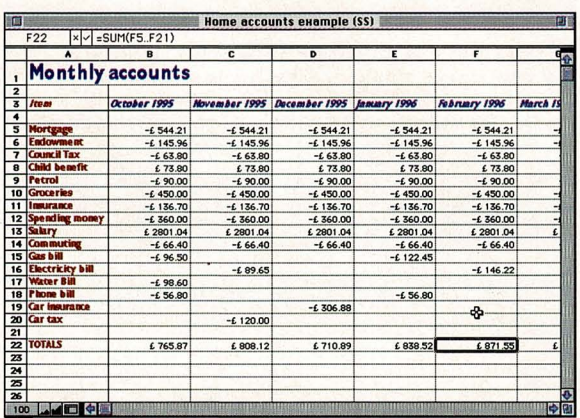
2 Use the tools available to increase the heading size and make the column headings more prominent. Using borders and patterns helps people understand the layout of your spreadsheet. Once you've entered your figures, you can also add colour to the text and modify type styles, which helps make the tabulating of the cell contents easier to follow.



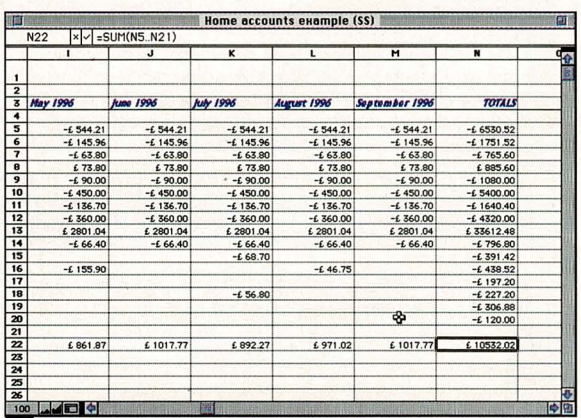
3 The figures can go in the first month's column. Income and expenditure are in together, so expenditure has minus signs – important for doing summary calculations later. Copy any regular payments into other months: click once on the cell containing the data, select **Copy,** click once on the cell you want to copy to, then select **Paste.** For quarterly and annual bills create new items in the items column, and insert the bills in the relevant months.

Inserting rows

To insert a row (or column) in *ClarisWorks*, select the row/column you want to insert in front of, then press **[shift] [command] I.** To delete an entire row or column, select it and then press **[shift] [command] K.** Remember, to select an entire row or column, click on its heading.



4 Once you've entered your data, you can start having fun (depending on your solvency). Your spreadsheet enables you to total your income/outgoings month by month, plus an annual summary. You can also total the year's spending on individual items – use your spreadsheet's SUM function.



5 Experiment! Now you can see what you're spending your money on and how much you've got left over. The sickeningly solvent subject in this example can now decide whether to send the younger son to boarding school, or plough the money back into a new Volvo.

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Ghost Track Busters

If your sequencer can create layers, harmonies, and echoes all by itself, it's not spooky – it's probably using ghost tracks. Ian Waugh examines their potential.

Got a sequencer? Bet you don't actually use all of its facilities. Many sequencers have a range of processing functions that help create effects which would otherwise take longer to set up or be difficult to produce.

Ghost tracks are just such a feature. They are tracks that use another track's note data but have their own track parameters, and because they have no data of their own, they don't use any memory. They're particularly useful for lines of music that repeat, such as bass riffs and drum parts – when you change the notes in the original track, the ghost automatically uses them too. That means you only have to change a music part once.

Even if your sequencer doesn't support ghost tracks, you can still try all the suggestions mentioned here by physically copying tracks. Of course, if you change the original, you'll have to copy it to all the 'ghost' positions, but the results will be the same.

Hidden layers

Most sequencers can only transmit a music part on one MIDI channel at a time, but using ghost tracks you can transmit it on two or more channels and use different sounds. The layer is an old but favourite trick. One of the most popular sound combinations is piano and strings, but try other combinations such as piano and vibes, piano and xylophone, or strings and vocals.

A neat trick is to layer a percussive sound with a sound that has a slow attack. With short notes, the percussive voice sounds, while the other voice only drifts in on longer notes.

Big bass lines and virtuosos

If you like big, deep, grungy bass lines and you're using a General MIDI sound module, try transposing the bass line down an octave. On some GM units the bass is an octave higher than it should be. If that's still not deep enough, create a ghost track or two and play several different sounds at once, transposing them if necessary. Try some of the GM lead and brass sound transposed down an octave to create an analogue effect.

It's but a short step from doubling up bass lines to doubling up piano lines. Adding an octave or two to a piano line gives the impression that it's being played by a virtuoso. Single note lines work better than chords, which can sound muddy, but try a few experiments, such as adding an octave to organ lines and brass stabs.

Instant harmony

You don't have to transpose by an octave. Transposing by other intervals creates harmony lines, but most sequencers' transpose functions work in semitones and take no account of the degrees of the scale. To see this for yourself, record a simple scale in C, create a ghost track and transpose it by various intervals, such as a third, fourth and fifth. Now compare the transposed line with a harmonically-correct third transposition, for example, and you'll find that only five of the eight notes in the scale are correct.

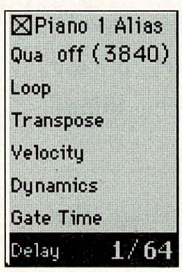
There are a couple of ways to correct this problem. You can edit the notes by hand (although first you need to convert the ghost track into a real or physical track), or you can simply copy the original. *Logic* has a **Select Similar Objects** function, which enables you to select all the errant notes of a certain pitch and edit them by the same degree. *Cubase's* IPS (Interactive Phrase Synthesizer) is an intriguing function that can generate and modify sequences in all manner of ways, and it includes a **Scale Correct** function, which can force harmonically correct transpositions. While you're there, try changing the tonality of a piece using scales such as Arabian, Hungarian, Balinese and Pentatonic. These can create some terrific effects.

PHANTOM NOTES

The Ghost Trio or Geistertrio is the nickname given to Beethoven's piano trio in D, because of the mysterious character of its slow movement.

SATANIC VERSES

There have been several virtuoso performers in the annals of music history. Among them, Liszt was widely regarded as the greatest virtuoso pianist of his day, while Paganini played the violin with such verve that many people believed him to be inspired by the devil.



Scroll through *Logic's* **Delay** values. When you reach one that's a multiple of a note duration, it is shown as such in the display.

HARMONY

The theory and practice of harmony is a relatively recent study. Its principles were discussed in the late 1500s, but it was not until 1722 that Rameau founded the modern theory of harmony by combining the viewpoints of the scientist and the composer.

HOW TO CREATE A GHOST TRACK

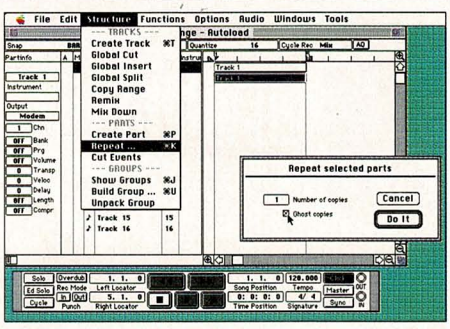
Cubase range: highlight a part or parts and select **Repeat** from the **Structure** or **Parts** menu (depending on your version of *Cubase*), or press **[command] K.** A pop-up box gives you the option of creating real parts or ghost parts. Alternatively, do a copy by selecting with your mouse, but instead of holding down **[option]**, hold down **[command]**.

Logic calls ghost parts aliases, which, in Mac terms, is exactly what they are. To create one, highlight a pattern and select **Make Alias** from the **Structure** menu.

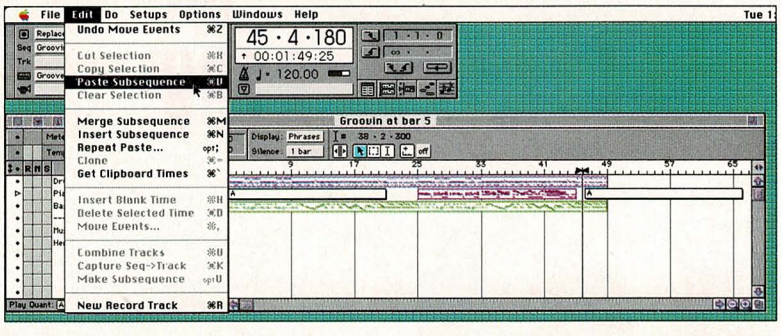
If you're using Opcode's *Vision*, when you copy a subsequence to a different location on the same track, any changes you make to one version will automatically make the same changes on all other copies.

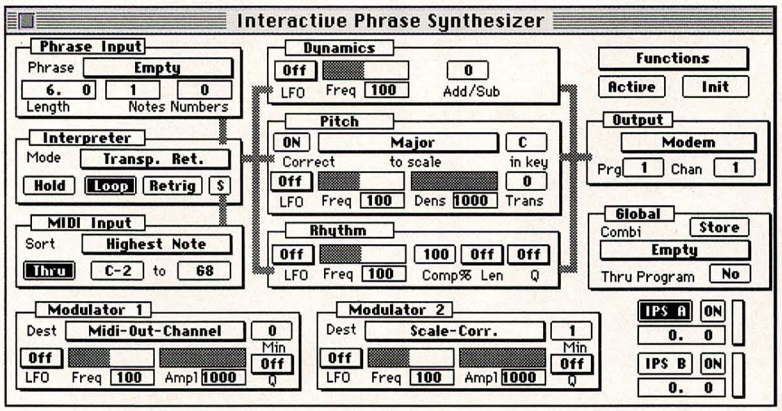
MotU's *FreeStyle:* dragging a copy of a section in a song to the Arrangement grid automatically creates a ghost part that references the original.

In *Cubase* you can create a ghost track by selecting **Repeat Part,** then clicking on the **Ghost Copies** box, or by holding down **[command]** and dragging a part.



In Opcode's *Vision*, you automatically create a ghost part when you copy a subsequence to a different location on the same track.





Cubase's IPS (Interactive Phase Synthesizer) has a **Scale Correct** function (bottom middle) which can help create harmonically correct transpositions.

If you don't want to correct the scale manually, intervals of five and seven semitones produce the largest number of 'correct' notes.

Creating MIDI echoes

It's easy to produce MIDI echoes: you simply create a number of ghost tracks and offset them in time. Most sequencers have a delay or track offset parameter, which enables you to move the track backwards or forwards in time in relation to the other tracks. The advantages of MIDI echo are that they don't need an effects unit, and they're more controllable. Try using delays such as 1/32, 1/16 and 1/8 note durations. If the music line contains 1/8 notes, use a delay of 1/16 so that the echoes occur in between the notes.

With most sequencers, you have to enter delay times in clock ticks, which means you need to know how many ticks there are in a quarter note. This is normally expressed as Pulses Per Quarter note (PPQ). This information should be in your sequencer's manual, but if it's adjustable, it may be in the **Synchronisation** menu. *Cubase*, for example, defaults to 192 PPQ, which means that for a 1/8 note delay you would use a value of 96, while for a 1/32 note delay, you'd use a value of 24. To make the echoes more realistic, make each slightly quieter than the previous one, using the volume or velocity track parameter.

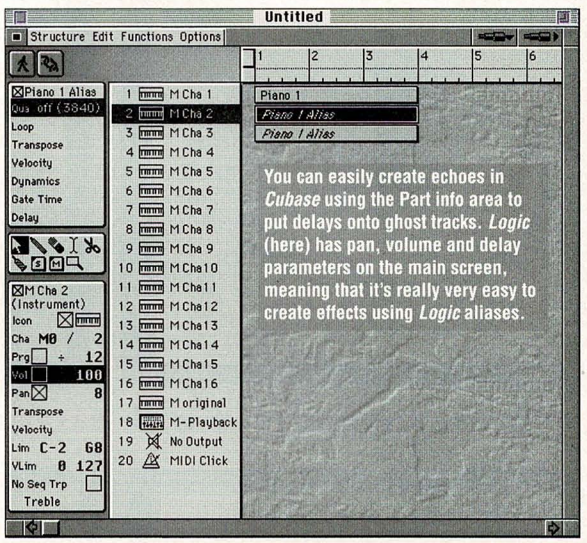
Panning around

You can make echoes even more interesting by panning them across the stereo image. Pan the main note hard left, then make the echoes travel around to the right. Or try putting the main note in the middle and making the echoes ping pong about. Most sequencers have a pan parameter on the main screen, which makes it easy to pan each track to a different position. A pan value of 64 is the centre; values below this pan to the left; values above pan to the right. *Cubase* doesn't have a pan parameter on the main screen, but you can use the Controller editor in the **Key Edit** window to draw in pan values.

Using ghost tracks is great fun – you can quickly and easily set up a wide range of effects by twiddling a few track parameters. Your sound module may have a maximum of parts or different sounds it can play at one time, so investigate your limitations before you embark on your masterpiece, and it should be a piece of cake. **MF**

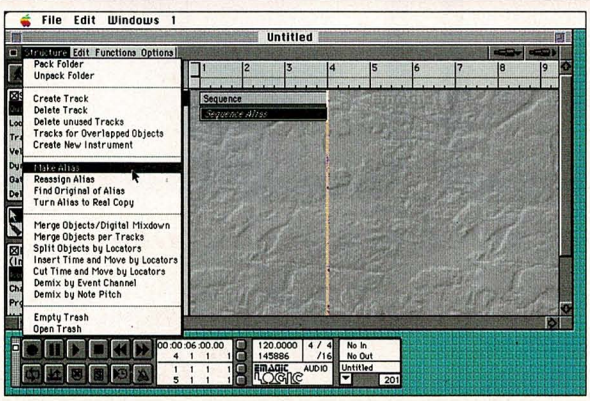
SEQUENCER ROUND-UP

Steinberg *Cubase*	£399
Steinberg *Cubase Lite*	£99
Contact Harman UK on 0181 207 5050	
Emagic *Logic*	£399
Contact Sound Technology on 01462 480000	
Passport *MusicTime*	£129.95
Passport *Mastertracks Pro 6*	£149.95
Contact Arbiter on 0181 970 1910	
Mark of the Unicorn *FreeStyle*	£149
Mark of the Unicorn *Performer*	£349
Contact Klemm on 01462 733310	
Opcode *MusicShop*	£149.95
Opcode *Vision*	£349.95
Contact MCMXCIX on 0171 723 7221	

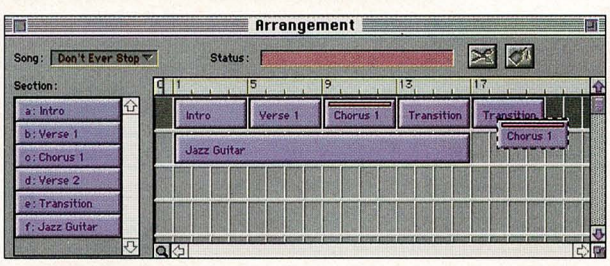

Untitled
Structure Edit Functions Options
Piano 1 Alias
Piano 1
Piano 1 Alias
Piano 1 Alias
You can easily create echoes in *Cubase* using the Part info area to put delays onto ghost tracks. *Logic* (here) has pan, volume and delay parameters on the main screen, meaning that it's really very easy to create effects using *Logic* aliases.

NARCISSISM

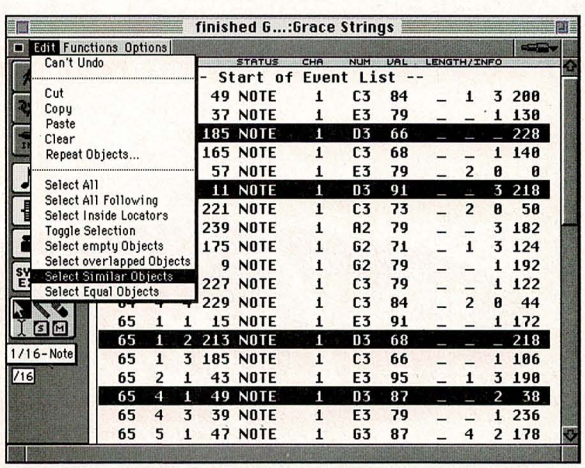
In Greek mythology, Echo was a nymph who was desperately in love with the beautiful Narcissus. Unfortunately, Narcissus was more interested in his own appearance than in hers, so Echo pined away until only her voice remained.



Like a good Mac program, *Logic* calls ghost tracks aliases. You make an alias exactly as you would do in the Finder on your Mac – by selecting the correct option from the menu bar.

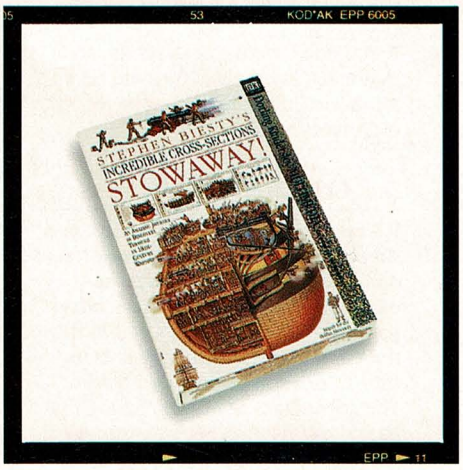


Ghost parts in *FreeStyle* are automatically created when you copy a section of a song to the Arrangement grid.

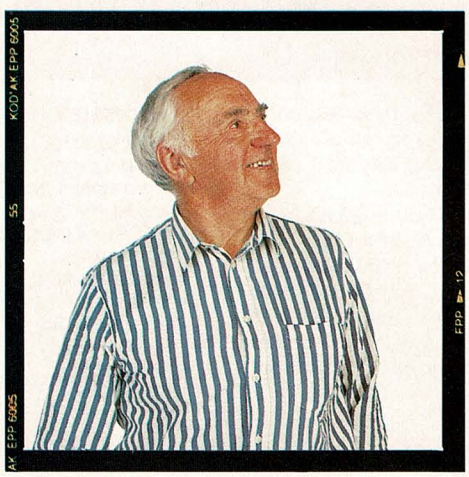

finished G...:Grace Strings
Edit Functions Options
Can't Undo
Cut
Copy
Paste
Clear
Repeat Objects...
Select All
Select All Following
Select Inside Locators
Toggle Selection
Select empty Objects
Select overlapped Objects
Select Similar Objects
Select Equal Objects
1/16-Note
- Start of Event List --
49 NOTE 1 C3 84 _ 1 3 200
37 NOTE 1 E3 79 _ _ 1 130
185 NOTE 1 D3 66 _ _ _ 228
165 NOTE 1 C3 68 _ _ 1 140
57 NOTE 1 E3 79 _ 2 0 0
11 NOTE 1 D3 91 _ _ 3 218
221 NOTE 1 C3 73 _ 2 0 50
239 NOTE 1 A2 79 _ _ 3 182
175 NOTE 1 G2 71 _ 1 3 124
9 NOTE 1 G2 79 _ _ 1 192
227 NOTE 1 C3 79 _ _ 1 122
229 NOTE 1 C3 84 _ 2 0 44
65 1 1 15 NOTE 1 E3 91 _ _ 1 172
65 1 2 213 NOTE 1 D3 68 _ _ _ 218
65 1 3 185 NOTE 1 C3 66 _ _ 1 106
65 2 1 43 NOTE 1 E3 95 _ 1 3 190
65 4 1 49 NOTE 1 D3 87 _ _ 2 38
65 4 3 39 NOTE 1 E3 79 _ _ 1 236
65 5 1 47 NOTE 1 G3 87 _ 4 2 178

Logic's Event Editor enables you to select similar events, which makes it easy for you to change incorrectly transposed notes to their correct pitch.

At last, a PC magazine for everyone; a PC magazine in crystal clear *English;*



a PC magazine loaded with entertaining features rather than endless reviews;

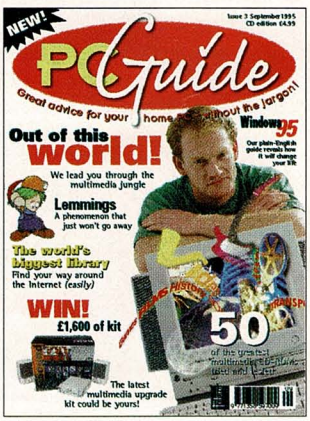


a PC magazine written for real people, not spotty nerds. At last, *PC Guide.*

Don't miss out on issue three of *PC Guide*, on sale Thursday 10th August

PC Guide

The PC magazine that speaks your language.



MAC ANSWERS

You've tried answers from the rest, now try answers from the best. The MACFORMAT team are on the case and are about to kick some Mac butt.

Welcome to the section of the magazine where we do our best to sort out your Mac-related problems. This month's team is Jim Chandler and Keith Sanders. If you have a question you'd like us to answer, use the form on page 72, or e-mail us on **macformat@futurenet.co.uk** including full details. Unfortunately, we can't take queries over the phone, because we're waiting for a really important call from Microsoft.

Crashing bore

GAMES

Q *Three games refuse to function on my Performa 475:* Monkey Island, Monkey Island 2, *and* Indiana Jones and the Fate of Atlantis. *Each crashes at the same point every time. The Apple help line is confident that the defect lies with the software, because no other games or applications are affected. The* Monkey Island *games were changed, but both replacements had the same defects.*

John G Bishop
Leyton, London

A The finger of suspicion points at *RAM Doubler.* It might be one of the best pieces of Mac software ever, but it has to bend the rules somewhat to work its magic.

Many games also bend the rules when it comes to memory handling. If the two clash, that's when the problems start. Try removing *RAM Doubler* from the Extensions folder and running the games using real RAM only. Since you're using System 7.5, you can use Extensions Manager to set up a custom Extension set that has *RAM Doubler* disabled, which you can use when you want to run one of your LucasArts games. **JC**

Drive a hard bargain

HARDWARE

Q *A 540Mb internal hard drive for the Mac costs about £158, while a 540Mb internal hard drive for a PC costs £85. Is it possible to attach the hard drive for the PC to my Mac, and would it work?*

DT Woodhouse
Beccles

The 630 – the first Mac to have an IDE drive inside instead of a SCSI drive. See 'Drive a hard bargain'.

A Sorry to disappoint you, but PC hard disks are not compatible with Macs. The hard drive system used on the PC is called IDE and is slightly slower than the SCSI system used on most Macs. IDE drives are cheaper because of the large number of drives manufactured. Apple put an IDE drive in the 630 as a cost-cutting measure, but it seems to have been a one-off experiment. New PowerMacs, such as the 9500, are being shipped with the new PCI slots in place of NuBus, which means that in the future you may be able to use a PCI card with an IDE port rather than a SCSI port. But do you want a slower drive just to save a few pounds? **KS**

Sad tale

HARDWARE

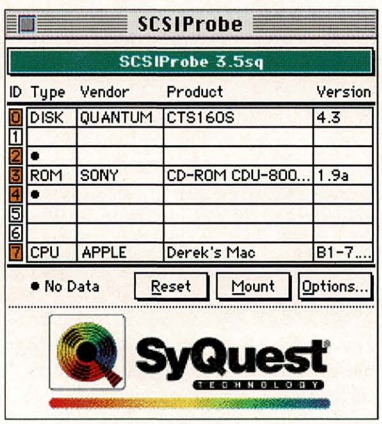
Q *When I switch on my Mac with the CD player already on, the Mac won't load past the happy Mac sign.*

Andrew Hayward
Auckley, Doncaster

A First check which ID number is allocated to your external CD-ROM. Most SCSI devices show their ID number at the back, along with two small switches, which you use to increase or decrease it.

Every device on a SCSI chain must have a unique ID number, and there can be a total of eight devices attached together. The Mac itself is always ID 7 and the internal hard drive is always ID 0, which gives you a choice of 1 to 6 for the remaining devices. Assuming the CD drive ID is not set to 0, 7 or the same as any other SCSI device that you may have, the finger of suspicion points towards software.

Delete all the Extensions that are to do with the CD-ROM drive – you can find a list of them in last month's X-Files feature (if you missed that issue, turn to page 125). Next, search out the CD software installation disks that came with your drive, and re-install the software.



SCSIProbe is a shareware Control Panel that can help you identify SCSI ID numbers. Here you can see that the internal CD-ROM drive is set to ID 3. See 'Sad tale'.

If that doesn't work, you may have an Extension clash. If you have System 7.5, use Extensions Manager to disable all unnecessary Extensions and Control Panels. With previous versions of the System software, you can just drag those Extensions out of your Extensions Folder and restart your Mac.

If you still have no joy, try changing your SCSI cable. If you've always had this problem, it could be that your Mac doesn't like the cable. That does not necessarily mean there is anything wrong with the cable – the Mac just doesn't like it. As a last resort, try using a SCSI terminator at the end of the chain. For more information about the SCSI system and SCSI problems, see this issue's free book. **KS**

Jagged edge

PRINTING

Q *I recently bought a Performa 630 to replace my LCII. I use a GLC PLP II laser printer, which has given me great service, but I now find that my PostScript fonts print with jagged edges, particularly at sizes above 18 point. Bundled with the Performa there appears to be* Adobe Type Manager *68000, 68020 and 68030. GCC sent me an update of their software, which*

Continued on next page

WHO'S JIM CHANDLER?

Jim has been working in the professional printing industry for eight years, and uses all the major software applications on both Macs and PC compatibles.

WHO'S KEITH SANDERS?

Keith works in technical support. He spends his days solving Mac problems for clients, and his evenings solving yours.

FLOPPY TIP

To eject a floppy disk without leaving a ghosted icon on the Desktop, click once on the disk then select **Put Away** from the **File** menu. Better still, press **[command] Y**.

TRINITRON

If you have a Trinitron monitor you may notice a faint line two thirds of the way down the screen (or two on large monitors). This is a wire securing a grid and is quite normal – it's known as the 'Triniton Line'.

HIDING TIP

To swap from one open application to another, use the application menu in the top right-hand corner of the screen. Hold down **[option]** as you do this if you want to hide the previous program.

enabled the printer to work to a certain extent, but as well as ragged fonts I now find that the first inch of print at the top of an A4 page (printed edge to edge) is missing. This never happened with System 7.1 on my LCII.
Jim Ross
East Calder, West Lothian

A PLP printers are not PostScript printers, so you need to use *Adobe Type Manager* if you intend to print PostScript fonts. It's worth checking that *ATM* is installed properly: check that the *ATM* Control Panel is in the Control Panels folder, that *ATM* is switched on, and that the *ATM* 68020/68030 files are in your Extensions folder.

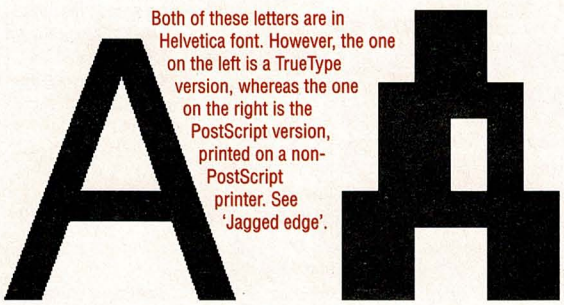
It's also worth checking that your fonts are in the right place for the version of *ATM* you're using. If you're using version 2.0.3 or earlier, the PostScript printer fonts have to go in the Extensions folder. In later versions – and if you're using System 7.5, you should have *ATM* version 3.7 – the printer fonts can live in the Fonts folder with your screen and TrueType fonts. If all these are in the right place, it might be worth reinstalling *ATM* from your System disks, just to make sure that one of the *ATM* files hasn't become corrupt. The simple answer is to try using TrueType rather than PostScript fonts – they don't need *ATM*.

As for your problem with part of the page not printing, make sure that your application's Page Setup dialogue box reports that it's printing on an A4 page rather than a US Letter page. This is surprisingly easy to miss, especially if your printer driver defaults to US Letter. If that doesn't account for the problem, it may be worth considering going back to the earlier version of your printer driver. **JC**

Space Wars

SOFTWARE

Q *I originate copy using* Word 5.1, *then take it over into* QuarkXPress 3.1 *in galley format. Although I use en-spaces at the beginning of each paragraph, when I take it into* Quark *the en-spaces revert to normal spaces, and I have to go through all the galley sheets changing them back to en-spaces. Why is this, and is there any way I can keep the en-spaces? When I was using* Word 4 *and an earlier version of* Quark *I'm sure I didn't have this problem.*
Alan Milnes
Burton on Trent, Staffordshire



Both of these letters are in Helvetica font. However, the one on the left is a TrueType version, whereas the one on the right is the PostScript version, printed on a non-PostScript printer. See 'Jagged edge'.

A Spaces are a minefield. In most word-processors and DTP programs the size of a space isn't fixed, especially if you ask for justified text. If the program needs to squeeze text onto a line, it reduces the size of the spaces; if it needs to add space to make a line justify properly, it increases the size of the spaces to suit. With programs taking such liberties over the size of spaces, it's almost impossible to use spaces to properly align text into columns – you should always use tabs.

Back when type was set using letters cast in lead, printers used spaces of various standard sizes to achieve the same ends. As well as normal spaces, they also had en-spaces and em-spaces. An en-space is the width of the capital N of any given font; an em-space is the width of an M.

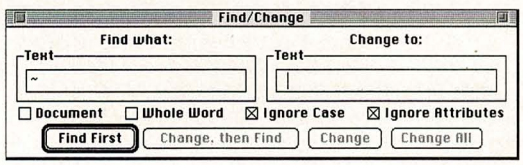
In most Mac programs, you can generate an en-space (though not always an em-space) which will not vary in width, even if the line is spread out to justify it – hold down the **[option]** key and hit the space-bar.

The problem you have is that this en-space 'character' is not a standard character, defined in the standard ASCII code table – how it is implemented is up to individual programs. In *QuarkXPress*, an em-space is defined as the width of two zeros (rather than an M, for some reason), and an en-space is the width of one zero. Quark Technical Support very helpfully suggest that your problem may be that *Word* (or even just the version you're using) defines these characters somehow differently from *QuarkXPress*.

What can you do about all this? It might help to try using the old *XPress* import filter for *Word* files that you used to use. Try doing a **Save As** rather than simply **Save** in *Word*, and save the text in *Word 4* (or earlier) format first. Or try saving your *Word* files in Page format.

If this doesn't work, there's a more laborious way around the problem. Search for all the en-spaces in your *Word* document and replace them with a character that's not used for anything else, like the tilde (~). Your document will look a bit of a mess, but when you import it into *XPress* you can search for the tildes and replace them with en-spaces. It's not a perfect solution, but it's certainly going to be much less laborious than changing them all by hand.

But why not use a tab at the start of each paragraph (it will be imported properly), or even use *XPress'* very powerful paragraph format features and indent the first line of all paragraphs? Both these methods enable you to adjust the indent precisely at any time after importing the text. **JC**



The Find and Replace feature, found in all word processors and DTP packages, can be put to a wide variety of purposes. See 'Space Wars'.

Safety first

VIRUSES

Q *I create word processor files on a PC, then transfer them to my Mac, using* PC Exchange. *Which virus detector should I use? Do* SAM *and* Virex *recognise PC viruses? If so, which is the better virus detector, and do they slow down the Mac?*
Dr DE Bateman
Bath, Avon

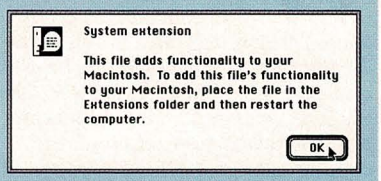
A Insidious as they are, viruses are only programs. As such, they only work properly on the machine for

WHAT DO EXTENSIONS DO?

Extending knowledge

SYSTEM

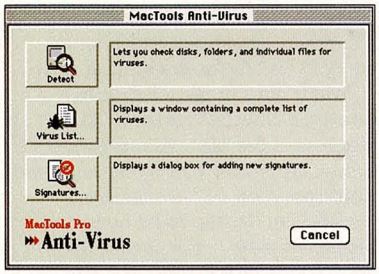
Q *When I double-click on them, most of the icons in my Extensions folder give the message: 'This file adds functionality to your Macintosh. To add this file's functionality to your Macintosh, place the file in the Extensions folder and then restart the computer.' I have done this, several times, but the message stubbornly persists. What am I doing wrong?*
Antonio AM Costa
San Paulo, Brazil


System extension
This file adds functionality to your Macintosh. To add this file's functionality to your Macintosh, place the file in the Extensions folder and then restart the computer.
OK

If you see this message, don't worry, don't panic, don't do anything. Just read the 'Extending knowledge' question in this box, then sit back and relax.

A Don't panic. Nothing's going wrong at all. Extensions, as their name suggests, extend the capabilities of the Mac's operating system by adding bits of code at startup. Once they've been loaded, that's usually it; they don't seem to do anything except sit there and take up space. Now because they're already loaded and running, double-clicking on them doesn't launch them – it just brings up the message you describe.

For example, Apple CD-ROM enables you to access the contents of CD-ROMs as easily as those of floppy disks, and the Chooser is available in your Apple menu for you to select any connected printer or networked Mac. No problem. Okay? **JC**



MacTools comes with a virus checker, or you could use *Disinfectant*. See 'Safety first'.

which they are written. A PC virus may wreak havoc on a PC, but on a Mac it's a lump of harmless data. If you inadvertently insert a floppy disk with a PC virus into your Mac, it doesn't do any harm at all, although when the floppy is put back into another PC it can do its unwanted stuff. Because PC viruses can't do any damage to Macs, Mac virus checkers don't look for them.

However, you still want a virus checker to protect against the few Mac viruses around. If you get a lot of Mac disks from outside sources, it's worth looking at a commercial virus checker. *Virex* and *Symantec's Antivirus for Macintosh (SAM)* are among the best, and there's little to choose between them. They retail at around £70 and are available from any large stockist.

If you don't want to shell out for your digital prophylactic, you could do a lot worse than John Norstad's excellent *Disinfectant*, which is completely free and is updated frequently. We include it on every issue of our CD, and always put the latest version on our floppy disk when it first appears. The current version, 3.6, was included on the floppy with MACFORMAT 26.

As for slowing your Mac down, most virus checkers detect you inserting a disk and check it for known viruses. This means that you have to wait a few seconds after you insert a disk, while the checker gives it the once-over. Many checkers look out for other possible viral problems as well, but they do this in the background, so you shouldn't notice they're there unless they think there's a problem. **JC**

Server you right

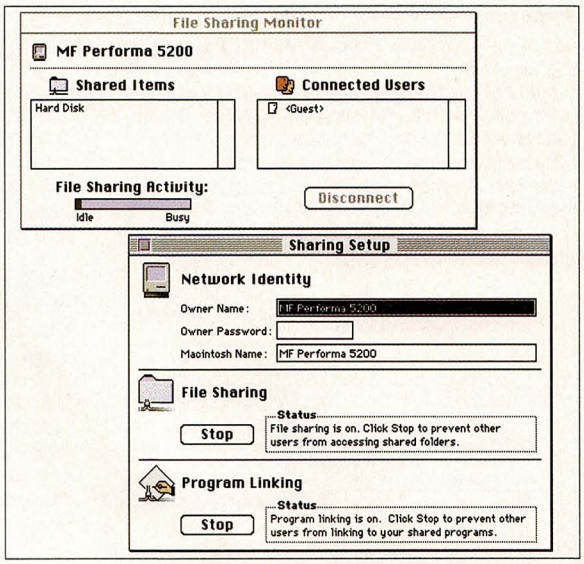
NETWORKS

Q *1. We want to add another computer to our network of three Quadra 650s and Workgroup Server 6150. Should we wait for the Quadra to be reintroduced, or is this some time away?*
2. If we connect our server to the Internet, will be all be able to access it?
3. Our US offices are purchasing a communications software package, but they are all on PCs. With our equipment, what is the cheapest way of being able to use DOS/Windows software? If it is loaded on the server, can we all access it?
Paul Waite
Kensington, London

A 1. The Quadra is Apple's series of 68040-based Macs, for business use. Apple are pushing PowerMacs as business machines, and the Quadra range is on its way out. Unless you specifically need a 68040-based machine, why not go for a PowerMac? They network perfectly.
2. This is a toughie. In principle, yes, it is possible. You need to attach a workgroup-type modem, such as the Shiva NetModem (prices start at around £350; ring Softline on 0181 401 1234). You then need to set up your server to enable the users to access the modem.

You must also run the relevant Internet software (FTP package, mail reader, Web browser, and so on) on each of the Macs that you plan to connect to the Internet. Your server also needs to run some kind of gateway, to enable it to function properly as an Internet server. You need to start getting involved with IP addresses and domains, and your Internet service provider will probably want to charge considerably more for a multi-user service than for just a single user. If you're serious, then my advice is to talk to your Internet service provider. It's definitely a non-trivial task.
3. If you mean that you simply want to share files that have been created in DOS or Windows packages, then you'll find that many PC applications have Mac equivalents. For instance, Microsoft's *Word* is available in either Mac or Windows versions, and documents created in one version can be loaded in the other.

If you mean that you want to run PC programs on a Mac, you need a PC still might not work properly on the Mac. If you have *Apple File Exchange*, which came with System versions before 7.1.2, you can use a little conversion utility called mb2mac to convert MacBinary files so that the Mac can recognise them. **JC**



Macs have built-in file sharing options, but if you want to share files with a PC, things get more complicated. See 'Server you right'.

MONITOR TIP

On some monitors, the Apple 16-inch for instance, the image may appear yellowish. To solve this, open the Monitors Control Panel, hold down **[option]** and click **Options.** Select **Mac Standard.**

CANCEL TIP

If you accidentally open an application, you can usually cancel it if you press **[command] [full stop]** straight away, but you must be quick.

Continued on next page

DOWNLOADING MAC FILES FROM THE INTERNET

Casting a hex

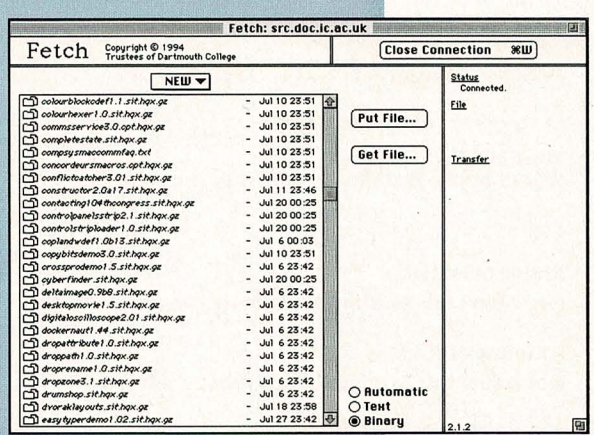
COMMS

Q *I can't access the Internet using my Mac, but I can access it via a PC clone at university. However, I can't get the files that I've downloaded to run on my Mac. They all seem to be archives that need BinHex translation. Are there any programs that enable me to do this cheaply, or is there another way I can get around the problem?*
Stewart James,
UMIST, Manchester

A Most program files are stored as binary files, which use eight bits to describe the values of the binary data. When the Internet was set up, however, most computers could only send text to one another. This text is described using seven bits, and if you try to send 8-bit binary data on a 7-bit mail or network system, the result is garbage. To get around this, various systems have been devised to convert 8-bit binary data to 7-bit data. The method most commonly used on the Mac is called BinHex, and many FTP sites on the Internet store their Mac files in BinHex format to ensure that the data can be sent anywhere on the Internet. You can usually identify BinHex files, because they end in .hqx, and opened into a word processor the first line of the file reads something like, 'This file must be converted with BinHex 4.0.'

If you download one of these files, you will need to un-BinHex it. The Mac compression utilities *StuffIt* and *Compact Pro* convert both to and from BinHex, and can often also open the resulting archives. Both utilities are shareware, and cost little to register.

With files downloaded using a PC, you frequently find that they have been converted into a special format called MacBinary, so that they can easily be stored on a non-Mac file system. This means a file that's otherwise fine



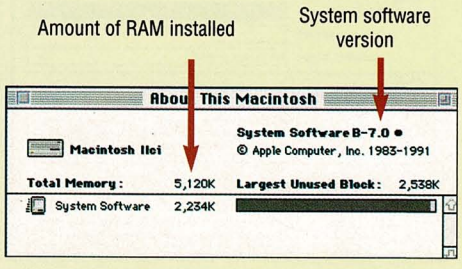
Downloading software from the Internet. Most of the file names have .hqx towards the end, indicating that they have been BinHexed.

The do-it-yourself problem solving guide...

One of the most common causes of problems on the Macintosh is Extensions or Control Panels clashing in the depths of your System Folder. Fortunately, it's easy for you to check if this is the case. Restart your Mac and hold down the **[shift]** key. You can let go of the key when you see the message, 'Welcome to Macintosh. Extensions off.' If everything now works, then you know that the problem lies in your System Folder. The only way to work out which item is the culprit is by trial and error. Remove a few Extensions and/or Control Panels, then restart your Mac, without holding **[shift]** this time. Keep on doing this until the problem no longer occurs, and you have located the offending software.

If this doesn't work, another common solution is to rebuild your Desktop. Start up your Mac with **[command]** and **[option]** held down. You will get a message asking if you want to rebuild the Desktop. Click OK, wait for it to finish rebuilding your Desktop, and see if this solves your problem.

If the problem persists then use the form below to ask our experts. We'll need to know a few facts about your Mac, so when you're in the Finder, select About This Macintosh from the Apple Menu. The picture (left) shows what we'll need to know.



DRAW TIP

In most drawing programs, hold down the **[shift]** key to draw a perfect square or circle. Hold down **[option]** to draw a shape from its centre.

emulator. Principal, on 01706 831831, distribute *SoftWindows* for £351.33, which enables you to run Windows programs on the Mac. Because you're still using a Mac, you can still access the Workgroup Server and copy files to and from your Mac's hard disk.

If, however, you mean that you want to use the Mac's built-in program linking capability and run PC programs under emulation on your server by 'remote control', well, yes, in theory it should work... but we've never seen it done anywhere. For more information on file sharing and program linking, see the Networking feature in MACFORMAT 24 (turn to page 125 if you missed that issue). **JC**

Portable RAM

HARDWARE

Q *Can I upgrade my PowerBook 150 screen using video RAM, as you can with an LCIII?*
Michael Somic
Bushley, Tewkesbury

A Sorry, but no, your PowerBook 150 cannot be upgraded with more video RAM (VRAM) to give more grey levels or colour. The only internal upgrades you can add to a PB150 are more memory, internal modem and replacement hard drive.

You'll have to use an external screen, connected via the SCSI port at the rear of the Mac. Radius produce a colour screen for PowerBooks but they cost over £500 and are really not worth considering. To be honest, it would be more cost-effective for you to upgrade your PowerBook to a colour model. Find more details about portable Macs in the portables feature back in MACFORMAT 27. **KS**

Upping the grade

HARDWARE

Q *I have a Performa 600 and I want to make it more up to date, like the newer PowerMacs. I'm getting hold of a new CD-ROM drive, and plan to upgrade my Mac's memory and hard drive capacity. What options are there for upgrading the processor to 040 or PowerMac?*
Ivor Lewin
Bachplein, Amsterdam

A There's no way you can add a PowerPC chip to your Performa 600 (IIvx) to turn it into a PowerMac. You *can* upgrade your processor to 040, using a DayStar accelerator, but the best path is to sell your Mac and get a 6100/66 with an internal CD-ROM drive. It has more RAM than your current 4Mb, and a much larger hard drive. By the time you've upgraded your old Mac, you would have spent just as much. **KS**

If you send in a question for the MACFORMAT experts to solve, please fill in and include this form (or a copy of it). And please make sure that you include all the relevant details – version numbers of software and so on – so that we have the best chance of helping you. Send your form and question to: Mac Answers, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW. Or fax it to us on 01225 446019.

Name .....

Address .....

.....

.....

Your Mac
(For example, Performa 200, IIfx, PowerBook 145):

.....

System version
(see About this Macintosh screenshot above): .....

Amount of RAM
(see About this Macintosh screenshot above): .....

Are you using Virtual Memory? ..... **YES/NO**
(This is accessed from the Memory Control Panel under System 7)

Do you have 32-bit addressing turned on? ..... **YES/NO**
(This is accessed from the Memory Control Panel under System 7)

Details of any relevant hardware which could help us to answer your question:

.....

.....

Now, use this space to describe your problem or question. Please include as much relevant information as possible, and continue on a separate sheet if necessary.

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Infini-D
Kurta Graphics Tablets
LogoMotion
Merlin Video Board
MiniCad
Multimedia Utilities
ProMotion
Sculpt 3D
Sketch!
Special Delivery
Strata MediaForge
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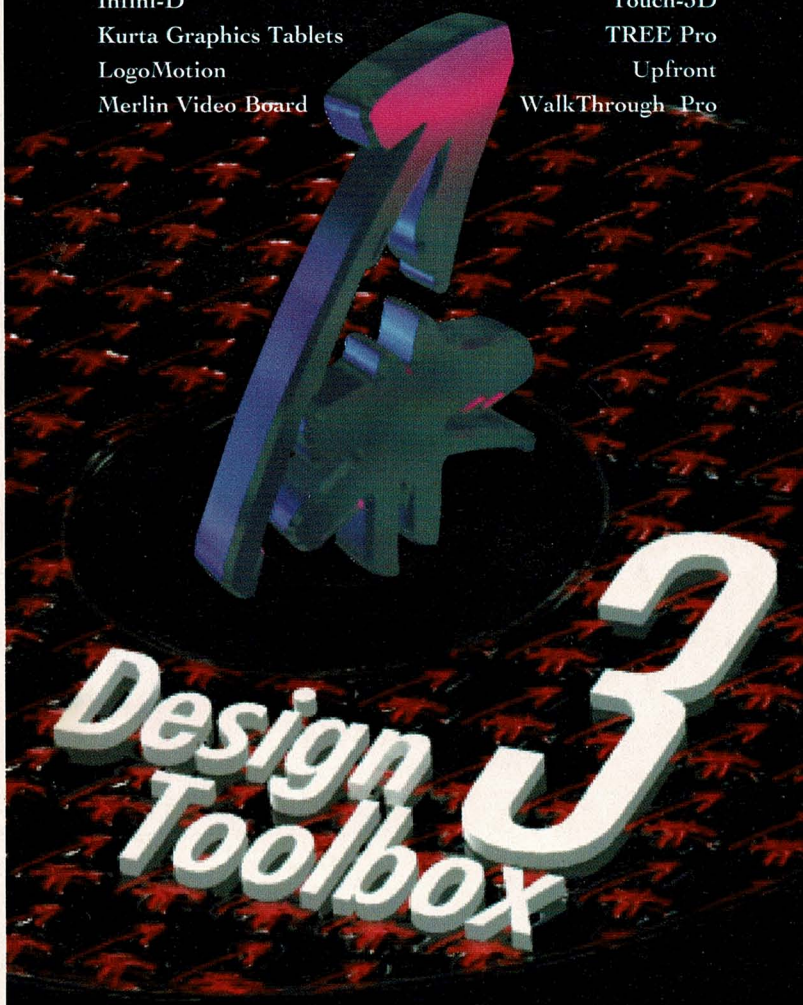
Strata Studio Pro
StrataType 3D
Strata Virtual 3D
Strata Vision 3D
SuperCard
SuperScape
TextureScape
Touch-3D
TREE Pro
Upfront
WalkThrough Pro



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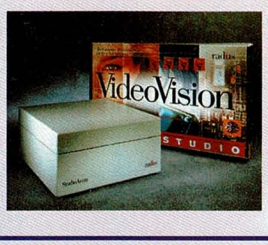

PRINTERS

MONO Printers

StyleWriter 1200 ..... **£199**
HP DeskWriter 320 ..... **£199**
HP DeskWriter 320 with feeder **£235**

Colour Printers

Colour StyleWriter 2200 ..... **£265**
Colour StyleWriter 2400 ..... **£345**
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Laser treatment

There are dozens of Mac-compatible mono laser printers on the market, so which one should you buy? Rod Lawton tests eight leading models and comes up with some surprising answers.

Which printer should you buy? Like so much else, it all depends on what you want to do with it.

Inkjet printers are quiet and cheap, and some offer output to rival low-end laser printers. But inkjets work by squirting tiny droplets of ink onto the page, so the ink tends to bleed into the paper, giving slightly less crisp resolution than a laser, and it can smear if it gets damp. An inkjet is fine for everyday correspondence, and adequate for modest DTP work, like simple, bold posters and fliers, but for most DTP jobs you need a laser printer. Even if your output is only going to be photocopied or reproduced cheaply, it helps if it's as good as possible to start with. Beyond that, for serious DTP you really need a PostScript printer (see the box on page 80), and there are no PostScript inkjets available.

Laser printers are the next step up from inkjets. At the budget end of the scale are 300dpi (dot per inch) machines, which are fine for printing proofs, but not quite good enough for a bureau to print from. The resolution from 600dpi models is vastly better – no problem for a print bureau to work from directly. Budget laser printers are not PostScript-compatible.

Why a printer needs RAM

A non-PostScript printer receives ready-prepared data from the Mac, which it simply translates to paper. A PostScript printer receives PostScript code, which it interprets and converts into an image it can print. So a PostScript printer needs a processor to convert the PostScript code. It also needs RAM, to hold the image prior to printing, plus any PostScript fonts downloaded to it – that is, any fonts not built-in. The manual will tell you which fonts are built-in – some printers boast as many as 99, so it's not just Times and Courier. Using these speeds up printing and saves RAM, leaving more room for your document.

The quest for quality

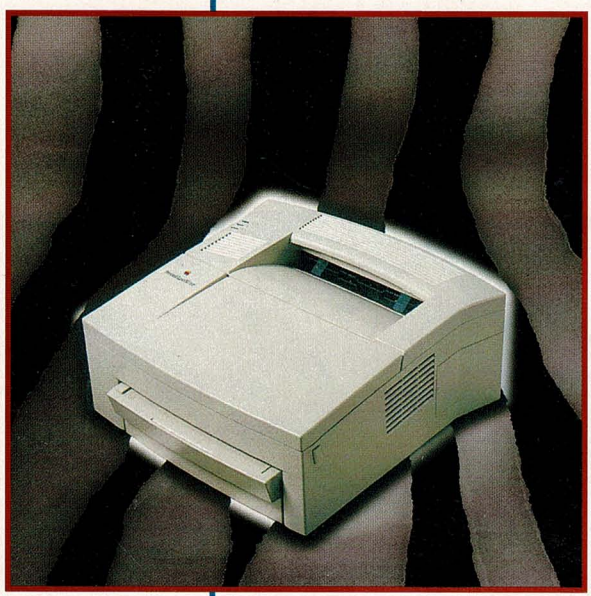
Some laser printers offer enhanced output resolution or improved greyscale quality. Resolution enhancement uses proprietary technology (Apple's own is called FinePrint) to give finer detail than the printer's hardware could manage alone. Hewlett Packard's LaserJet 4 printers lead the field among 600dpi printers, but it takes a keen eye to spot the difference.

On 300dpi printers, greys can be very blotchy – 600dpi machines offer subtler grey tones. There are various methods of greyscale enhancement, such as PhotoGrade, which Apple used on the LaserWriter IIg – it produces greyscales to match many 600dpi printers. PhotoGrade needs lots of printer RAM, though, so look out for other systems from other makers.

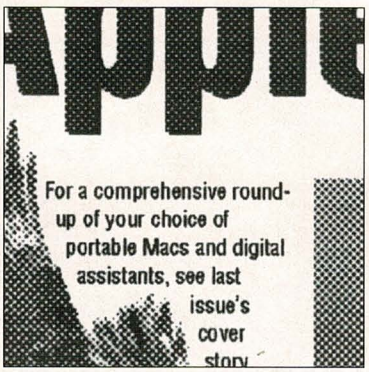
Continued on next page

Apple LaserWriter 300

This entry-level laser printer is the only non-PostScript model included in this round-up, but that doesn't mean it's incompatible with high-end software like *QuarkXPress*. In fact, with the help of *Adobe Type Manager* and the Mac's QuickDraw output, the lowly Apple LaserWriter 300 can print out quite complex DTP documents... eventually.



In testing it took around 15 minutes to print out our test page – far too long for all but the most patient users. What came out at the end of that 15 minutes, however, was surprisingly good. The PICT graphics were reproduced with a coarse dot pattern, but the greyscale rendition was excellent. The graduated tinted box on the top right of the page was reproduced with some banding, but not much, while the flying pig lost all the subtle shading in the body and much of the detail in the wings. The red title was reproduced in a reasonably accurate shade of grey, and overall the greyscale rendition was on a par with the better 600dpi machines, despite the fact that the resolution is much lower. The type didn't come out particularly accurately, with some lumpy characters and dubious inter-character spacing at small sizes, but all the type on the page remained readable.



Monster printing times for PostScript output, quirky type rendition but fair greyscales.

The 300 is the cheapest of the machines we tested by nearly £250 – and its lack of PostScript compatibility is only a handicap in speed terms. If you print the odd complex document only now and again, it's your best bet. And, being a non-PostScript printer, it doesn't run out of RAM – your Mac has to do all the processing work itself.

LASERWRITER 300

Price: £546.
Contact: Apple on 0800 127753.

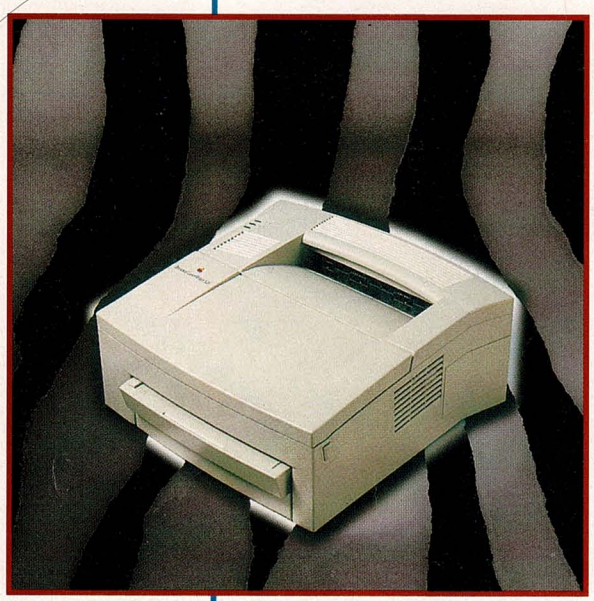
MACFORMAT RATING 68%

HOW IT'S DONE

Laser printers use a laser beam to build up the image on a photo-electric drum. This charged drum attracts toner from a reservoir. A sheet of paper is sandwiched between the drum and a hot roller, fusing the toner to the paper. The drum typically goes through four rotations to create a single page.

Apple LaserWriter 320

The 320 is the cheapest PostScript Apple LaserWriter available, and ships with only 2Mb of RAM... which is a problem. Our test page wouldn't print at all, simply generating a PostScript error every time we tried. And there's our hint of the month: if you get PostScript errors during printing, check how much RAM your printer has installed. If it's no more than 2Mb, then you may have found the trouble straight away.



We eventually got our page to print by turning off the FinePrint option (Apple's proprietory resolution-enhancement software), and the output was hard to distinguish from that of the 300. The graduated box still showed greyscale banding, but the bands were more numerous and closer together in tone.

The PICT graphics were made up of equally coarse dots, but displayed the same, good, tonal rendition. Despite the fact that both are 300dpi models, the type came out a great deal better on the LaserWriter 320 than it did on the 300. The variable stroke thickness of the body type came through well, and the fine type alongside the flying pig was perfectly readable. In the speed test, the 320 came out in the middle of the field, which sounds good until you realise that it was printing at only 300dpi, while its rivals were nearly all printing at 600dpi.

300dpi printing at a 600dpi price! Reasonably quick, but expect to run out of RAM occasionally.

The 320's biggest problem is its price – it's up against stiff competition from budget 600dpi models, such as the Texas Instruments MicroLaser, which comes with 4Mb of RAM. The LaserWriter 320 works well, but it's underspecified and overpriced. Try again, Apple.

LASERWRITER 320

Price: £793.
Contact: Apple on 0800 127753.

MACFORMAT RATING 52%

Hewlett Packard LaserJet 5MP

On first impressions the 5MP is cheap and cheerful, but the price tag and the styling hide a star performer. This is the cream of the bunch, and amply demonstrates a number of facts about laser printers. First, the nominal speed rating tells you virtually nothing. Although its quoted speed is only 6ppm, the 5MP processed our test page in a mere 190 seconds – faster than any of the other non-Apple printers, and only just beaten by the far more expensive Apple 360.

That's not all. Hewlett Packard's proprietary resolution enhancement system is reckoned by many to be the best around, and the 5MP's output was the equal of any of the other 600dpi models, if not better. Hairlines were clearer on the 5MP than even on the mighty Apple 16/600, and the fine type around the flying pig was certainly finer.

Best of all, though, was the greyscale rendition. On the standard output setting, it rendered the graduated box as well as any of the other models, with only moderate banding. With HP's proprietary greyscale enhancement switched on, the graduation was fantastically smooth – none of the other printers came anywhere near it. If you must have sheer printing speed, proven durability and massive expandability, you *might* need to buy one of the other models tested here. If not, there's simply no good reason for buying one of the others in preference to this little gem

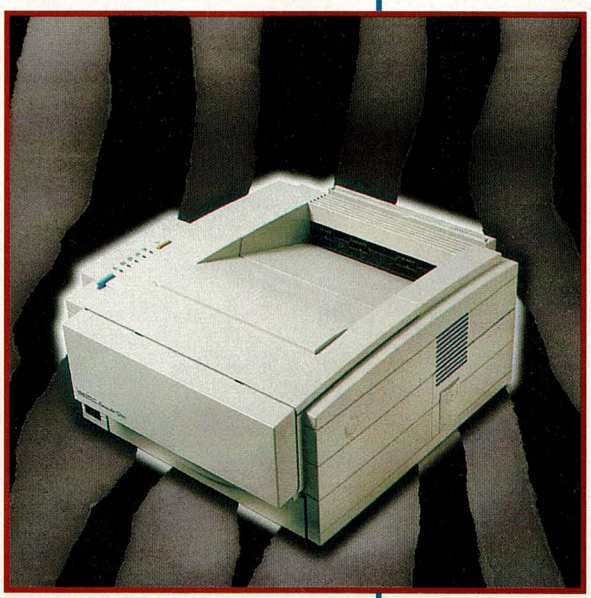
MACFORMAT Classic

HP LaserJet 5MP

Price: £1,174.
Contact: Hewlett Packard on 01344 369222.

MACFORMAT RATING 95%

The best all-rounder, regardless of price. Lovely greyscale enhancement and good resolution.



Apple LaserWriter 360

At £1,200, Apple's entry-level 600dpi printer is certainly a long way from being a budget bargain, particularly if you're buying it for home use. So does the performance justify the price? Well, it depends on what you're looking for.

With 7Mb of RAM as standard, the LaserWriter 360 can process many more pages at a time than the worthy LaserJet 5MP (reviewed just above). But then, with the difference in price, you could buy a lot of RAM for the Hewlett Packard printer, and it'd be interesting to see what it managed to do with it all. In the speed test the 360 was significantly faster than the much cheaper HP, although to be fair the HP was supplied with much less RAM.

Resolution? Unless you examine your printouts with a microscope, it's difficult to spot any difference in sharpness among the 600dpi printers reviewed here.

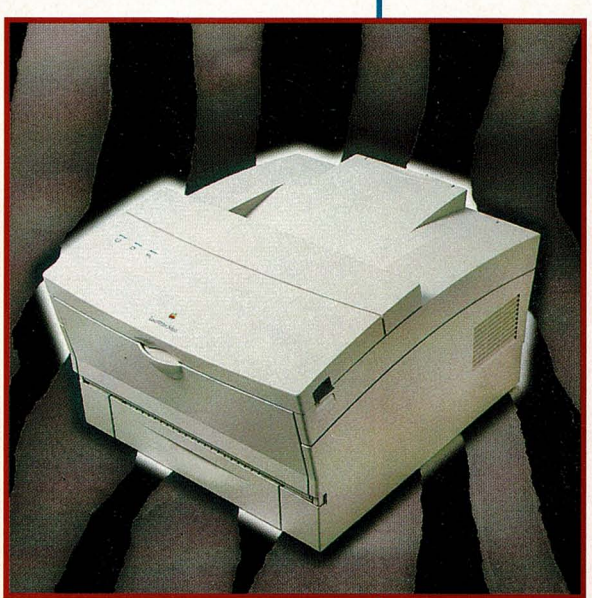
The big differences in quality of output tend to be in tonal rendition and smoothness of greyscales, and in this respect the 360 performs only adequately. Like most laser printers, it tends to compress tones towards the top end of the scale – the red heading, for example, came out at what looked like about 80 to 90% black. Like all the Apple printers we tested, grey tones were produced with a much more pronounced dot pattern than third-party rivals. If you must have an Apple printer, and you have money to spare, then the LaserWriter 360 is a worthwhile buy. And if the Hewlett Packard 5MP printer wasn't so damned good, this machine would get a better rating. But it is, and it doesn't.

LaserWriter 360

Price: £1,251.
Contact: Apple on 0800 127753.

MACFORMAT RATING 73%

Fairly quick, but only average performance for a 600dpi printer – at an above average price.



LACKING RAM?

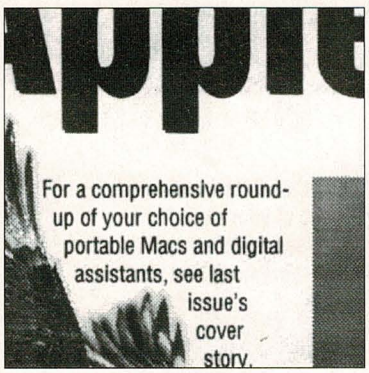
Low-end PostScript printers ship with 2Mb of RAM, but as little as 300 to 400 K of that may be available for page processing. Each Type 1 font you download consumes around 25K, and TrueType fonts take more.

Continued on next page

GCC Elite 600

If there were points for sheer prettiness, the Elite 600, GCC's 600dpi printer, would romp home. But we're a hard-headed lot here and it takes more than a nice finish and lots of lights and buttons and labels to turn our heads. After all, everyone knows that Mac printers don't actually *need* lots of fancy buttons – those are there simply because this is a multi-platform printer, and needs all those buttons for more complicated and less user-friendly PC use.

The output quality is on a par with the LaserWriter 360, but there are subtle differences in greyscale rendition – the GCC machine's greys are less 'dotty' than the Apple's, but there is more banding in the panel with the graduated tint, top right of the test document. This is a test of how many different greys a printer can produce, and exposes any tendencies of the printer to round up or round down greys to the nearest convenient value. The ability to differentiate shades of grey is also a function of basic resolution – the higher the resolution, the easier they are to differentiate.



It's lovely to look at, but the Elite is as expensive as the LaserWriter 360, and not as fast.

But the big difference between the two printers is in terms of print speed. Although both have the same nominal speed of 10 pages per minute, the GCC took exactly a minute – approximately 30% – longer than the Apple machine to output our test page.

Given the Apple's slightly lower price, as well as its extra RAM (the GCC comes with only 4Mb as opposed to the 360's 7Mb), the Apple LaserWriter 360 is a clear winner... unless, of course, you like nice looks and lots of buttons.

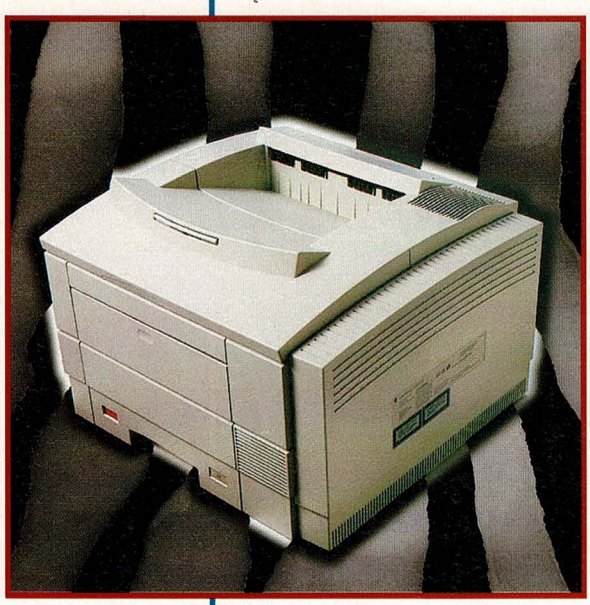
GCC ELITE 600

Price: £1,585.
Contact: GCC on 0181 569 4030.

MACFORMAT RATING 67%

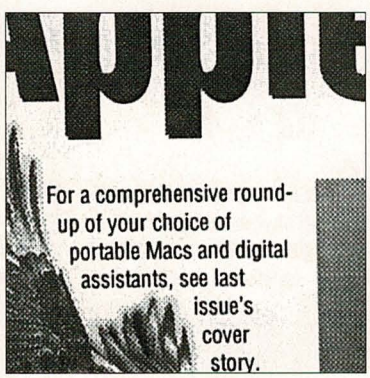
Apple LaserWriter 16/600

The 16/600 is Apple's desktop heavyweight 600dpi printer. With more RAM (8Mb, to be precise), a faster printing engine and a larger price tag than any other 600dpi machine reviewed here, you would expect it to blow the rest out of the water when it comes to speed and output quality.



Well, it printed our test page in a mere 107 seconds – which was a third faster than the speedy LaserWriter 360. And the output quality was good, although not good enough to set it apart from the rest of the 600dpi printouts, which was disappointing to note.

As a busy office machine, though, the Apple heavyweight has lots going for it, particularly if you plan to connect it to a network. There's its sheer speed for a start – it's much quicker than any of the other 600dpi printers. Then there's its built-in EtherNet capability. EtherNet is around four times faster than LocalTalk and, providing you have an EtherNet network and EtherNet-equipped Macs, you can expect your printing times to come down further still when printing over a network.



It's fast, and it has EtherNet built in. But if quality is more important than speed, look elsewhere.

Add to this the 16/600's durability and expandability, and you have a serious bit of printing kit. But will you be on a network? Can you afford EtherNet? If the answer to both questions is no, and you're simply looking for a printer for home use, then the 16/600 really doesn't make any sense. And if output quality is more important to you than speed, then Apple's high-end desktop laser is a dodo – beaten by both the vastly cheaper HP LaserJet 5MP and the vastly more expensive Lexmark Optra R. Hmm...

LASERWRITER 16/600

Price: £1,996.
Contact: Apple on 0800 127753.

MACFORMAT RATING 79%

Lexmark Optra R

The Optra prints at 1,200dpi, although for this you need a RAM upgrade – the standard Optra R ships with a pitiful 2Mb of RAM, but try to download more than a handful of fonts and you're into the PostScript equivalent of the Bermuda Triangle. For 1,200dpi printing you need around 10Mb of RAM, which is one of the reasons for its hefty price tag.

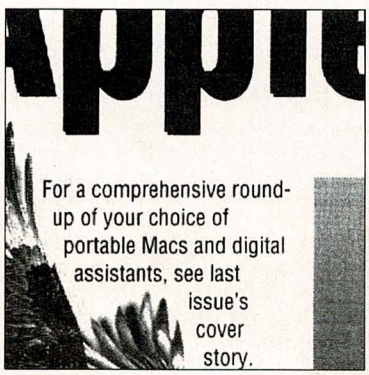
If you're going to invest these kind of sums, you need to know that the difference between 600 and 1,200 dpi printing really is noticeable – even given the high quality of today's 600dpi printers, coupled with their various resolution-enhancing widgets. At first glance, the output from the Optra R was similar to many of the other machines tested. The graduated panel emerged almost as smooth-toned as the greyscale-enhanced 5MP's output, and the overall tonal balance looked good.

The big differences emerged on closer inspection. The graduated bar, top left, under the words 'TEST PAGE' gave all the other printers trouble, but the Optra R produced a perfectly smooth and gradual transition from black to white and back to black. The PICT graphics showed detail that was simply invisible in any of the other printouts. And the type? The differences were subtle, but the Optra R was clearly better. The smallest type was still pin-sharp and fine, with no tendency towards blocking out. The payoff is the hit on your bank balance and the print time. Six minutes is a long time to wait, even for 1,200dpi output, but if you need to produce really high-quality camera-ready pages, the Optra R is the bee's knees.

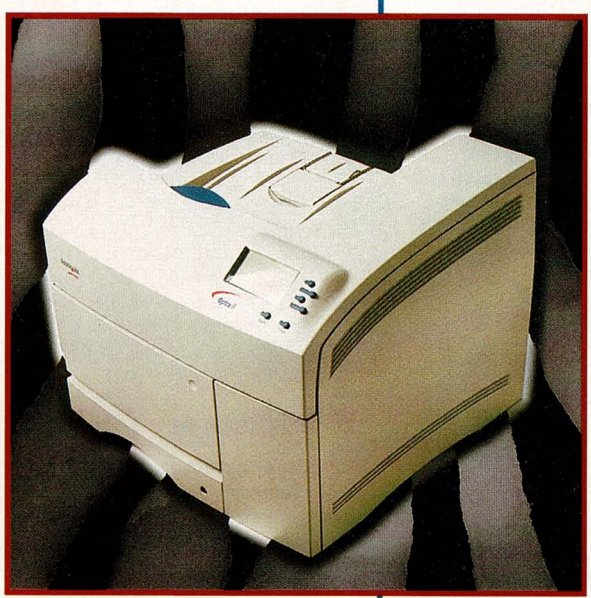
LEXMARK OPTRA R

Price: £2,278.
Contact: Lexmark on 01628 481500

MACFORMAT RATING 84%



A 1,200dpi heavyweight that needs lots of RAM and a strong desk. Clearly superior output.



Epson EPL9000

This is the only A3 model we tested, so price comparisons are bound to be a little unfair, but as we carried out the speed test using A4 paper, and printed the pages at the same size as all the others, the other comparisons are still valid. Although the EPL9000 is an A3 printer, it's not a vast desktop monster that threatens to buckle your table legs and push your Mac into your waste paper basket. In fact, it's no larger than most of the other machines we tested.

In the print test, the Epson lagged a little behind the Apple 360, but was convincingly quicker than the Elite 600. The resolution was about par for the course, as was the greyscaling. Interestingly, the EPL9000 was the only printer we tested that produced anything like a correct-looking tone for the main headline. All the others suffered from that perennial laser printer weakness – printing non-black tones too dark.

But while the Epson gets the thumbs-up for its accurate mono rendition of colour tones, it must receive a thumbs-down for the odd posterising effect it carried out on the shadow behind the flying pig, which was supposed to blend from black to white, and not show up as a single-toned outline with sharply-defined cut-off points. This was slightly odd, given that the graduated tinted panel showed little banding, and that the effect persisted even with the printer's resolution enhancement feature switched off.

With its A3 paper-handling, the EPL9000 is a very solid performer. The list price appears high, but shop around and you might be surprised at the bargains you find.

EPSON EPL9000

Price: £2,936.
Contact: Epson on 01442 61144

MACFORMAT RATING 84%

Good quality and a fair turn of speed. The ELP9000 is a good buy if you need A3 output.

Continued on next page

STREET PRICES

The prices quoted here are RRPs or list prices, and all include VAT. The table on page 82 gives you an idea of the real prices you can find if you shop around. Check the adverts in MACFORMAT, or contact a specialist retailer like Printer City, tel 0171 775 4200.

THE LANGUAGE: POSTSCRIPT VS QUICKDRAW

PostScript is a 'graphical imaging' or 'page description' language, invented by Adobe (the people who also gave the world *PageMaker* and therefore DTP itself, but that's another story). It's a way of coding instructions to tell a printer what to print. The one drawback is that the printer needs to have a PostScript interpreter built into it – a powerful processor that decodes these instructions and creates the image.

Printers are either PostScript or non-PostScript. If they're non-PostScript they're often called 'QuickDraw', but this doesn't mean they have QuickDraw built in – QuickDraw is the system that your *Mac* uses, mainly for screen imaging.

When you print to a PostScript device, a PostScript printer driver translates the Mac's internal QuickDraw graphics image into PostScript, before it sends it to the printer. The printer rasterises this information – in other words, it creates the bitmap image, which it then applies to the page from this mathematical information. In contrast, when you output to a QuickDraw (non-PostScript) printer, the Mac itself generates a raster (bitmap) image, which it sends directly to the printer. The printer doesn't then need so much RAM or processing power.

You might see reference to Level 1 or Level 2 PostScript. Level 2 has not superseded Level 1; it's more like a deluxe version of the same thing, offering faster printing, better support for individual printer models, greater ease in setting up print jobs, colour matching between screen and printer, data compression for faster transfer, caching of regularly-used objects, and improved memory use. Level 1, on the other hand, is more reliable.

Non-PostScript printers can't print PostScript files directly, although if you have *Adobe Type Manager* your Mac can interpret PostScript fonts for your printer. You can also get PostScript interpreters, which convert PostScript output into a form that non-PostScript printers can handle. The only problem is that they tend to be slow.

Just to complicate matters, there's also a new version of QuickDraw, QuickDraw GX. It comes free with System 7.5 but works with earlier versions – you simply have to install it yourself. It needs an extra 2Mb of RAM to run, and is only supported by some new software packages, but it offers many enhancements:

- It can handle up to 16,000 characters (early PostScript and TrueType fonts could only manage 256).
- You can have different page sizes within a single document.
- It offers transparent graphics or text, rotating, skewing, and watermarks.
- It makes control of printing easier: you can drag files onto Desktop printer icons. Each printer can have its own print queue, and you can view these and move print jobs around within each one. You can select different printers from the Print dialogue instead of having to go to the Chooser.

MORE RAM!

When you compare prices, make sure you're comparing machines with the same amount of RAM. For PostScript printers, RAM works out at anywhere up to £70 a megabyte – the more the better. A budget PostScript laser printer is typically sold with the minimum it needs – say 2Mb of RAM – but to print a *QuarkXPress* document of several pages and more than a couple of fonts you need more like 6Mb. Don't say you weren't warned.

THANKS

A special thanks to Gasteiner Technologies Ltd for supplying us with the Apple printers reviewed. Gasteiner carry many different printers, and can be contacted on 0181 345 6000.

Setting up a new printer

A Mac printer usually comes with a cable to connect it to your Mac, although it is worth checking. This cable simply connects from the printer port at the back of your Mac to an identical port at the back of the printer. If you are on a network, you'll need another transceiver and cable – ask for one when you buy.

Next you install the printer driver. This comes on a disk and should have its own installer script. Drivers for the ImageWriter, StyleWriter and LaserWriter are provided as part of the System; third-party printer manufacturers use these or provide their own drivers. A driver may work with several printers, and Apple's LaserWriter driver works with any PostScript printer.

Then tell your Mac which printer driver to use, from the Chooser. If you have any applications open when you choose a new printer in the Chooser, open and close the **Page Setup** dialogue in the application before you try to print, to update the application with the new printer information.

If you have QuickDraw GX, however, things work differently. You can drag a file onto a printer icon on the Desktop, or select a printer from within the Print dialogue.

The best on test

Which printer is best for you? You clearly can't tell much from price, or from the ppm printing speed that the manufacturers take such pride in quoting. And you pay plenty for the privilege of owning an Apple.

For output quality combined with value, the HP LaserJet 5MP wins by a mile. If you need a heavy-duty network machine, the Apple 16/600 is a better buy than it looks. And if high-quality output is a priority, the 1,200dpi output of the Optra R really is twice as good as the output from any 600dpi machine. **MF**

MONO LASER PRINTERS AT A GLANCE

Manufacturers rate the performance of their printers in terms of pages per minute (ppm). A low-end laser printer will probably croak along at around 4ppm, while a heavy-duty office machine can whizz through the local rainforest at 12ppm. These figures tell you (a) the maximum speed at which the printer's mechanism can push pages through, and (b) absolutely nothing else. In fact, a printer only ever achieves these maximum quoted speeds if the material that's being printed is extremely straightforward – a single column of text, in one font and one size. In other words, the hardly ever reach these dizzying heights. The speed of a printer (a PostScript printer, at any rate) is governed by how fast it can process the PostScript information it's being sent. This depends on the amount of RAM installed and the speed of the processor. The speed of the printing engine itself is largely irrelevant if you're outputting page layouts, or even word processor documents with several fonts and graphics. There's precious little correlation between quoted maximum printing speed and the actual printing speed, given a halfway complicated DTP document.

To test these machines, we generated a page in *QuarkXPress*. Based on the grid used in MACFORMAT, it included several fonts and a couple of large PICT files arranged in a multi-column, multi-box layout – complex enough to test the printers' processors rather than their sheer throughput speed. The test results are listed below, with other relevant details. Note that the memory configurations and prices quoted for the Optra R and the Epson EPL9000 were not minimum specs. All the speed figures were obtained using the default settings, but where resolution or greyscale enhancement could be switched on and off via the Print dialogue options, further printouts were made to check their effect.

Model	Resolution	RAM	Max RAM	Quoted PPM	Print test	Paper size	Tray capacity	Secondary tray	Built-in fonts	EtherNet port	Street price	Cost of ink cartridge
Apple LaserWriter 300	300dpi	512K	–	4	990 sec	A4	100	–	39	Not available	£510	£50
Apple LaserWriter 320	300dpi	2Mb	8Mb	5	207 sec	A4	100	–	39	Optional	£740	£50
HP LaserJet 5MP	600dpi	3Mb	35Mb	6	190 sec	A4	250	MP tray (100)	45	Optional	£880	£70
Apple LaserWriter 360	600dpi	7Mb	16Mb	10	172 sec	A4	250	MP tray (50)	99	Optional	£1,200	£80
GCC Elite 600	600dpi	4Mb	20Mb	10	252 sec	A4	250	MP tray (50)	60	Optional	£1,300	£90
Epson EPL9000	600dpi	6Mb	64Mb	8	220 sec	A3	250	MP tray (50)	35	Optional	£1,750	£170
Apple LaserWriter 16/600	600dpi	8Mb	32Mb	17	107 sec	A4	250	MP tray (100)	99	Yes	£1,850	£90
Lexmark Optra R	1,200dpi	10Mb	64Mb	12	360 sec	A4	200	Manual feed	49	Optional	£3,050	£150

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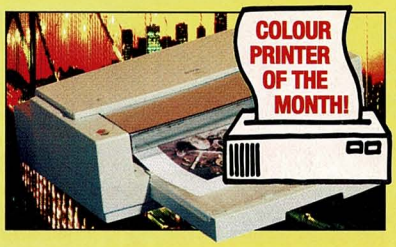
Epson Stylus Pro XL

Super A3, 720dpi, Postscript Level 2

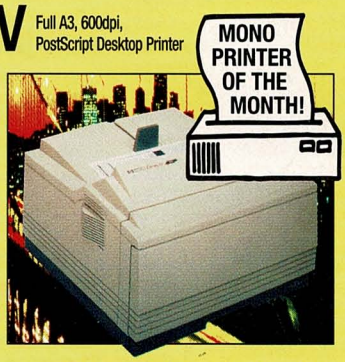


The new Epson Stylus Pro XL saves time and money with its excellent 720x720dpi output and paper handling up to Super A3 (up to 329 x 483mm). You can output full-size mock-ups in all sizes up to A3, but the Epson Stylus Pro XL is just as outstanding on everyday A4 work. A wide range of output materials are available including coated and gloss papers and overhead transparency film. With its 720x720dpi advanced piezo printhead technology together with the sophisticated Epson MicroDot ink delivery system, the Stylus Pro XL enables high definition colour printing - photo-realistic images or bold graphics, subtle tonal gradations or consistent solids - can be achieved cost-effectively. The Epson Stylus Pro XL has clear, intuitive control panels and couldn't be easier to operate and comes with Parallel and RS422 as standard with Ethernet, LocalTalk, Coax and Twinax as options.

Epson Stylus Pro XL.....£1525

HP LaserJet 4MV

Full A3, 600dpi, PostScript Desktop Printer



The new 16ppm HP LaserJet 4MV sets a new standard for workgroup printing, offering A4/A3 paper size printing and the most advanced printer management capabilities. With true 600dpi resolution, HP's Resolution Enhancement technology (see panel) and micro-fine toner, the HP LaserJet 4MV gives outstanding performance - even on scanned photos with 120 levels of grey at 106lpi from HP PCL5 Windows printing or 122 levels of grey at 106lpi in PostScript. The HP LaserJet 4MV is fast too! A 16ppm engine with a cached 33MHz RISC processor offers unmatched speed and versatility.

HP LaserJet 4MV.....£2099

COLOUR PRINTERS

A4 COLOUR INKJET

Apple StyleWriter 2400 .....£375
360dpi, BW: 3ppm, Col: 3ppm, Serial

HP 660C.....£365
600x300dpi colour, Col: 1ppm, BW: 4ppm, Serial or Parallel

Epson Stylus Pro £369
720dpi, BW: 3ppm, Col: 1.5ppm, Parallel & Serial

HP 850C..... BEST BUY! £429
300x300dpi col, Col: 3ppm, BW: 6ppm, Parallel & LocalTalk

Tektronix 140 .....£899
PostScript, 8Mb, 360dpi, 1ppm, Parallel & LocalTalk

HP 1200C/PS.....£1065
PostScript, 4Mb, 300dpi colour, 4 carts., BW: 7ppm, Col: 1ppm, Parallel & LocalTalk

HP 1600CM £1355
PostScript, 6Mb, Col: 300dpi & 4ppm, BW: 600dpi & 8ppm

A3 COLOUR INKJET

Epson Stylus Pro XL BEST BUY! .£1525
720dpi, BW: 3ppm, Col: 1.5ppm, Serial & Parallel

Lexmark PS4079Plus £2445
PostScript, 8Mb RAM, 1.5ppm, Serial, Parallel & LocalTalk

A4 COLOUR LASER

Apple Colour L/W 12/600PS ...£4850
PostScript, 12Mb RAM, 600dpi, BW: 12ppm, Col: 3ppm, all interfaces

QMS MagiColour LX BEST BUY! £5435
PostScript, 600dpi, 24Mb RAM, BW: 12ppm, Col: 6ppm, 80Mb HD, Serial, Parallel & LocalTalk, Includes free on-site install and 1 Year On-Site Warranty

Tektronix Phaser 540Plus.....£6070
PostScript, 600dpi, 20Mb RAM, BW: 14ppm, Col: 3.5ppm, Parallel & LocalTalk, includes start-up kit

A4 (OVERSIZE) COLOUR DYE-SUBLIMATION

Tektronix 440 PS £5295
PostScript, 300dpi, 16Mb RAM, BW: 1ppm, Col: 2-3ppm, Parallel, Serial & LocalTalk

Kodak XLS8600 ... BEST BUY! ...£6130
PostScript and Raster, 300dpi, 32Mb RAM, 75 sec. per print, Parallel & LocalTalk

A3 (OVERSIZE) COLOUR DYE-SUBLIMATION

Tektronix 480 XB.....£12,125
PostScript, 300dpi, 48Mb RAM, 3.2mpp, Parallel, LocalTalk & Ethernet

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A4 MONO INKJET / LASER FOR HOME USERS

HP DeskWriter 320.....£189
InkJet, 600x300dpi, 3ppm, Parallel or Serial Interface
With Sheet Feeder.....£225
320 Colour Upgrade (300dpi, 3ppm).....£35
3 Year On-Site Warranty.....£40

Apple StyleWriter 1200 ... BEST BUY! .£209
InkJet, 720x360dpi, 3ppm, Serial Interface

HP DeskWriter 540.....£239
InkJet, 600x300dpi, 3ppm, Parallel or Serial Interface
320 Colour Upgrade (300dpi, 3ppm).....£35
3 Year On-Site Warranty.....£40

TI MicroWriter PS23.....£485
PostScript Laser, 300dpi, 5ppm, 2Mb RAM, 250-sheet tray, Parallel, LocalTalk
3 Year On-Site Warranty.....£240

A4 MONO INKJET / LASER FOR HOME USERS / SMALL OFFICE

TI MicroLaser 600.... BEST BUY! .£599
PostScript Laser, 600dpi, 5ppm, 2Mb RAM, 250-sheet tray, Parallel & LocalTalk
3 Year On-Site Warranty (8 hour response).....£240

Apple Select 320 .....£625
PostScript Laser, 300dpi, 4ppm, 2Mb RAM, 100-sheet tray, LocalTalk

Hewlett Packard 5MP.....£779
PostScript Laser, 600dpi, 6ppm, 6Mb RAM, 250-sheet tray, Parallel & LocalTalk
3 Year On-Site Warranty.....£135

Apple Select 360 .....£999
PostScript Laser, 600dpi, 10ppm, 7Mb RAM, 100-sheet tray, Serial, Parallel & LocalTalk

A4 MONO LASER FOR WORKGROUPS

TI PowerPro 65 .....£1065
PS, 600dpi, 12ppm, 6Mb RAM, 67 fonts, Parallel, LocalTalk

HP 4M Plus £1329
PostScript, 600dpi, 12ppm, 6Mb, Parallel, Serial, Ethernet

DEC 3500F £1549
PostScript, 600dpi, 12ppm, 3Mb RAM, Parallel, Serial & Ethernet, Fax Send and Receive

Apple 16/600PS £1599
PostScript, 600dpi, 16ppm, 8Mb, Parallel, Serial, Ethernet

Lexmark Optra.....£2599
PostScript, 1200dpi, 12ppm, 10Mb RAM, Ethernet

HP 4Si/MX..... BEST BUY! ..£3199
PostScript, 600dpi, 10Mb RAM, Parallel, LocalTalk, Ethernet

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FOR MORE INFORMATION ABOUT MAINTENANCE CONTRACTS

A3 MONO LASER FOR WORKGROUPS

HP 4MV £2099
PS, 600dpi, 16ppm, 12Mb, Parallel, LocalTalk, Ethernet

QMS 1660E.....£2920
PostScript, 600dpi, 16ppm, 12Mb RAM, Parallel, Serial & Crown Ethernet

DataProducts T8Plus... BEST BUY! ..£2999
PostScript, 1200dpi, A4: 8ppm, A3: 5ppm, 36Mb RAM, Parallel, Serial & LocalTalk

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- Agfa StudioScan II **£449**
- KPT Vector Effects **£99**
- 88Mb Syquest Drive w/1 cart, cables and s/ware **£245**
- Motorola 3400 Online 28,800 FaxModem **£185**
- Sony 17SF1 Trinitron Display **£599**
- SoftWindows (with upgrade) & RamDoubler **£179**

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2MB *(30pin)*	£58
4MB *(30pin)*	£95
16MB *(30pin)*	£349
4MB *LCIII–475–630-Centris–Quadra–PowerMac*	£95
8MB *LCIII–475–630-Centris–Quadra–PowerMac*	£189
16MB *LCIII–475–630-Centris–Quadra–PowerMac*	£349
16MB *PowerMac only*	£299
32MB *LCIII–475-630–Centris–Quadra–PowerMac*	£CALL
8MB *DIMM For PowerMac 9500*	£235
16MB *DIMM For PowerMac 9500*	£449
32MB *DIMM For PowerMac 9500*	£799
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Zip Drive

It's dinky, cheap, easy to use and it has loads of storage space. It can store your software, back up your hard disk, create photo libraries, make the tea...

Picture this: an inexpensive, removable media drive that can give you half a gigabyte of storage for less than £250. Impossible? No. Iomega's new Zip drive is a low-cost drive offering portable mass storage for your Mac.

Based on new technology designed and patented by Iomega, the drive is a SCSI device that works much like a floppy drive – only much, *much* faster. It uses magnetic, writable 100Mb disks, which you can take out and carry around (they're the size of a 3.5-inch floppy, but slightly thicker). It's smaller than a CD-ROM drive (about 136 x 184mm, or 5.35 x 7.25 inches), just over a pound in weight, and you can stand it on its side next to your Mac or lay it flat like an external CD-ROM or optical drive.

Simple but speedy

Connecting the drive initially looks like a poser. Instead of the familiar 50-pin SCSI connection, it uses a 25-way D connector – the same as the one on the back of your Mac. This isn't really a problem, though: a lead is supplied, and a 25-way through connection ensures that you can connect the rest of your SCSI chain as normal. A toggle switch enables you to change between SCSI IDs 5 and 6, which should fit in happily with most Mac setups.

The drive is fast, although not quite as fast as a hard drive (the average seek time quoted is 29ms, sustained transfer rate 0.79Mb to 1.40Mb a second, up to 50Mb per minute throughput, if that means anything to you). It's suitable for everything you'd do with a hard drive, except for professional direct to disk (D2D) recording using music sampling software.

That means you can use it for all kinds of stuff, from backing up your hard drive (and you do that regularly, don't you?) to creating photo libraries. You could even be really organised with your files and keep all your games on a single Zip disk, all your image files on another and all your word processing files on a third. With 100Mb disks costing £15.22 if you buy them singly, or as little as £11.69 each if you purchase them in bulk, the cost of a gigabyte of storage drops to an extremely affordable £117.

Installation

The Iomega Zip drive is supplied with an installation disk and two 100Mb Zip disks – one's a blank disk, while the other contains the Iomega tools. Just run the installation disk and follow the on-screen instructions. All the drivers are automatically installed ready for a reboot, so the next time you start up, your Mac recognises the drive. As an experiment, we connected the Zip drive to a Mac and booted without installing the drivers to see if it would work. It did – we could access the Zip disks immediately, although the fact that the Mac used System 7.5 with MacPeak SuperSpot drivers installed might explain it. Or maybe it was just luck.

In use, the Zip drive is brilliant. It's smaller, neater and faster than an optical drive, and stays reassuringly cool even during prolonged use. Okay, so the capacity of each disk is slightly lower, at 100Mb, but you really don't notice the difference in use.

The Zip drive is perfect for low cost data storage, and the drives are so cheap it's not a burden to buy several for a home or office environment. Go on, buy one, and back up your hard disk now! **Clive Parker**

The Zip drive is the perfect answer to removable media storage, it's small, fast and eminently affordable.

Iomega Zip Drive

Price: £176.25 for the drive; 100Mb disks vary between £15.22 and £11.69 depending on quantity ordered. **Out:** September. **Requires:** any Mac, System 7 or later. **Contact:** Iomega on 0800 898563.

Features 89%
Reasonably fast, efficient storage for your Mac in a compact unit.

Ease of use 90%
Easy to set up, easy to use. Says it all, really.

Documentation 85%
Not much, but informative and easy to follow.

Value for money 93%
Superb value. This is going to be hard to beat.

MACformat rating 91%

A Zip in your machine

Power Computing in the US (001 408 526 0500) have announced that they intend to start offering the Zip drive as an optional extra in their Mac clones sometime in the future. For more on Power's machines, see this issue's News pages

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All kinds of everything

An encyclopaedia is one of the most essential purchases you can make – but which one should you buy? MACFORMAT brings you the definitive round-up.

You're not convinced that CD-ROMs are as great as everyone keeps telling you. They're full of grainy video in titchy boxes, and haven't half the worthwhile content of a good book, surely? But if you think these overpriced silver frisbees have no future, perhaps you should take a look at a recent CD-ROM encyclopaedia.

In just a few years, these reference books on CD have become the catalyst for a revolution. The best-selling encyclopaedia in the world is not the *Britannica*, or a *Collins* or a *Hutchinson* – it's *Microsoft Encarta*. The fact that a CD-ROM now occupies the top spot in the league table of encyclopaedias has awoken book publishers and computer types to the promise of multimedia.

It's even more astonishing when you consider that firms like Microsoft and Grolier have only a few years' experience of compiling these volumes, compared with what must be decades'-worth of knowledge at the command of book publishers. Yet they've still come out on top.

Multimedia extras

What books and CDs have in common is that they both make huge amounts of information available to you. But it's the extras that CD-ROM offers which really set it apart as a medium.

Like their printed equivalents, CD-ROM encyclopaedias are essentially stores of hard facts. Where they differ is in the number of ways that they enable you to find the information you're looking for. No mere A to Z is adequate as a reference source any more – now you can search the entire contents for a mention of your subject. And a good CD-ROM encyclopaedia offers all sorts of other ways of trawling through information.

Even more useful is the way you can use cross-references easily. If you're researching a piece of history, you can find references to other relevant areas and jump straight to them with a few clicks of your mouse.

CD-ROM enyclopaedias also take full advantage of multimedia. Once you've read an entry on the Great Depression, for example, why not look at some photos of life in the 1930s? Then you can watch broadcast film that's been converted into QuickTime video, or listen to radio broadcasts made into audio clips your Mac can play. But despite the efforts that are placed into cramming video and pictures onto the disks, don't expect a gee whiz entertainment circus. These are serious reference sources, and most of the effort has gone into creating authoritative text, and getting as much as possible onto a single CD-ROM (or two CDs in the case of *Guinness*). It's up to you to decide if you can make use of them.

Over the next few pages we review all of the 1995 editions of the available Mac encyclopaedias – but you might reasonably ask why we've taken so long to get round to it. After all, 1996 is only a few months off. The simple truth is that the Mac version of Microsoft's *Encarta* has only just come out, some eight months after it came out in its other format for PCs. The *Guinness* newcomer beat it by a few weeks, while the *Compton's* and *Grolier* discs were on sale before the year began. This pair will also have 1996 editions for the Mac out shortly.

RICHARD HILL

Continued on next page

Microsoft Encarta '95

Encarta '95 is the best-selling encyclopaedia available, but is it as good as its success implies? MACFORMAT critically probes its contents.

MACFORMAT Classic

You can't get excited about an encyclopaedia, can you? It's a costly utilitarian item – the sort of thing you might invest in to help the kids with their homework when they no longer regard you as omniscient. But *Encarta* is special. It contains a stunning quantity of authoritative information on almost every subject you can think of, and it's extremely user-friendly.

The main beauty of *Encarta* is that it's so easy to access the information you want. The interface is unfussy, in soothing greys and greens, and the window never gets so crowded or complex that you feel lost. You can also access your Desktop and open other documents and applications while you're running *Encarta* – as long as you have the RAM to spare, that is.

Each time you open *Encarta*, it takes you to the last entry you looked at. From that entry you can go to related articles, or click on red highlighted words and jump straight to the article on that subject. If you want to go to another subject entirely, use the menu bar to choose an area of life (such as geography or social science) and a category within that, and *Encarta* takes you there. If you want to find something specific, click on **Find** on the menu bar, and the Pinpointer appears. From there you can search through *Encarta's* index in any number of ways, with minimal fuss.

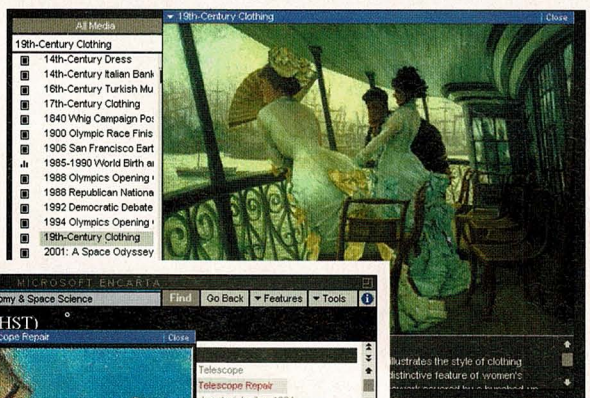
The articles are well researched and thorough, and the tone of the writing is as objective as possible. While the language is too adult for younger children, its extensive coverage is just right for older schoolchildren. The illustrations are of a consistently high quality and always come with captions, and you can enlarge the pictures, photos and videos (which are QuickTime movies). And they aren't even pixellated. The soundtracks that accompany some articles are clear, with no delay or stuttering. You can also print out an article, or paste it into a word processor document.

If you get bored with looking through articles, why not take a look at the Features menu? There you can find the Media Gallery – an archive of all the videos, photos, pictures and suchlike in *Encarta*. There's also an Atlas, where you type in a place name, and it accesses a map of it in seconds. The brilliant Time Line, in which pictures represent various eras, makes basic facts and trivia easily available. Finally, there's the diversion of Mind Maze, a general knowledge game.

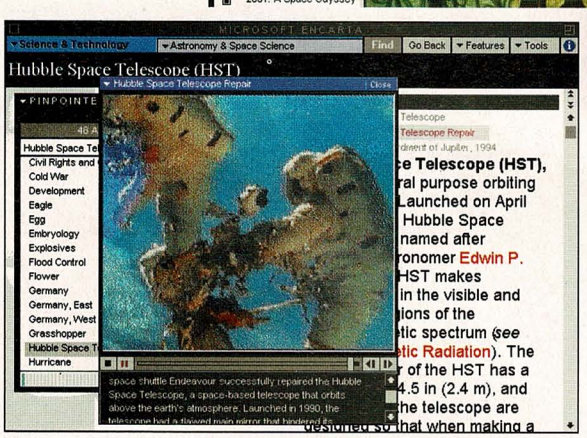
If there's nothing in particular you want to look up, click on the Browse Panel and take a random tour. *Encarta* offers not only a huge amount of carefully researched information, but just about every imaginable way of accessing it, and some entertainment besides. This has to be the definitive CD-ROM encyclopaedia. **EVA LAUER**

INTERACT!

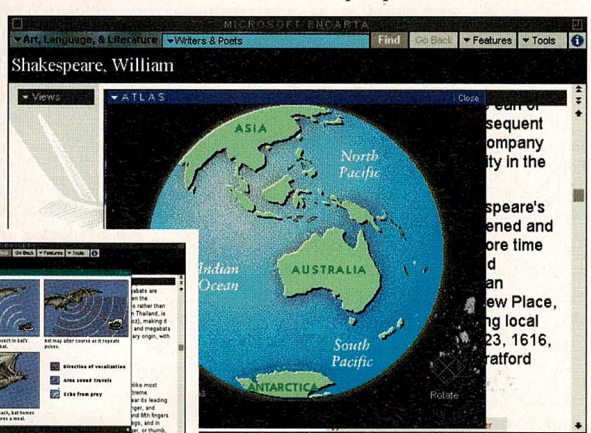
Encarta features eight 'Interactivities', which require 3Mb of RAM to run, on top of the 5Mb initially required to run the CD. That's a lot of RAM. You can exit *Encarta* and run the Interactivities separately instead. It's worth taking a look at them – some are useful, others entertaining.



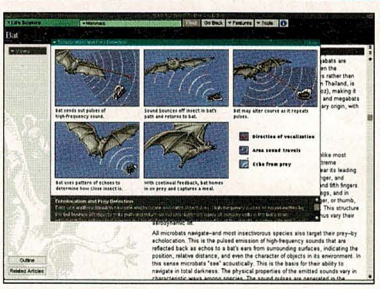
The Media Gallery contains all the pictures, video and soundtrack in *Encarta*. Tissot's painting is used as an example of 18th century clothing.



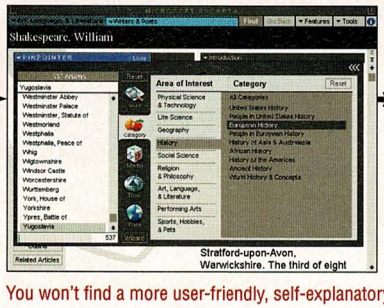
The video showing an astronaut repairing the Hubble Telescope is surprisingly good quality.

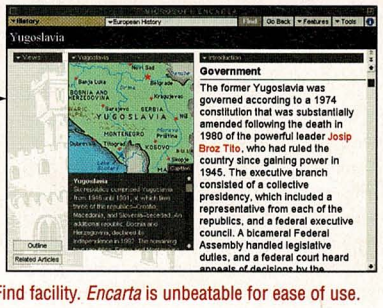


You access a map by typing in the place you want to see. From there you can zoom out to the globe.



You can enlarge the picture box to see more clearly how bats use echo-location to find food.




History
European History
Yugoslavia
Introduction
Government
The former Yugoslavia was governed according to a 1974 constitution that was substantially amended following the death in 1980 of the powerful leader Josip Broz Tito, who had ruled the country since gaining power in 1945. The executive branch consisted of a collective presidency, which included a representative from each of the republics, and a federal executive council. A bicameral Federal Assembly handled legislative duties, and a federal court heard
Related Articles

You won't find a more user-friendly, self-explanatory Find facility. *Encarta* is unbeatable for ease of use.

ENCARTA '95

Price: £105.75 plus £7.45 delivery.
Out: Now.
Requires: LCII or better, 5Mb of free RAM (6 to 8Mb recommended), System 7 or later, 13-inch colour monitor, 640 x 480 resolution, 4Mb of hard disk space and a CD-ROM drive.
Contact: Microsoft on 0345 002000.

MACFORMAT RATING 90%

The Grolier Multimedia Encyclopedia

Six hours of multimedia and 33,000 articles from *The Academic American Encyclopedia* have been crammed onto a single CD-ROM – but was it worth it?

An encyclopaedia with hidden depths, *The Grolier Multimedia Encyclopedia* appears on your screen with little fanfare – simply a menu and a brief slideshow of images. Despite this initial understatement, it offers as thorough an introduction to the arts, geography, history, science, social issues and technology as you could hope for.

Grolier's strength lies in the variety of ways it offers for browsing through its information. Using the Knowledge Tree you can work your way through the subjects, starting with broad categories and whittling the selection down to the specific topic you want. Or there's a capable word search facility that enables you to find any place your chosen subject might be mentioned. Alternatively, you can simply go through all the pictures stored on the CD-ROM. There are many other options on offer – the Knowledge Explorer video essays are a good starting point for more casual exploration. Each of these QuickTime movies offers an overview of its subject, giving you an idea of where to go next.

The text information is concise and accurate – everything you'd expect from an authoritative reference book. But while the images are generally sharp and clear, the choice of pictures feels dated in some areas. Some give a narrow representation of the subject, too – you won't believe its romantic, castle-obsessed view of Britain.

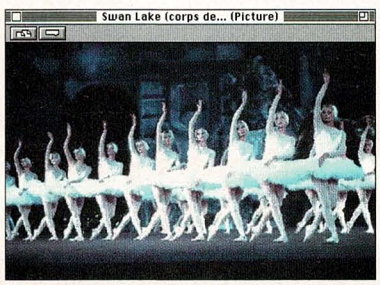
There's a useful option with which you can nominate a word processor from your hard drive, which you can then call up at any time to make notes, or cut and paste text into.

Every search method, text entry, video or picture has its own window, which you can move or resize. If you open too many windows you tend to find that they get lost under others, and it's fiddly moving them and switching between them. That aside, *The Grolier Multimedia Encyclopedia* has a distinctly understated, confident feel, which will impress you more and more as you use it.

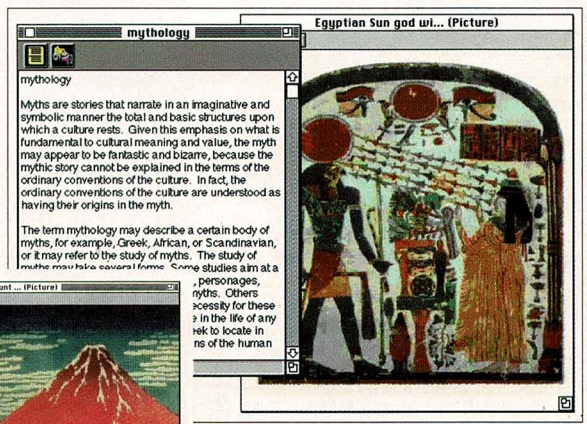
RICHARD HILL

SIMPLE AS ABC

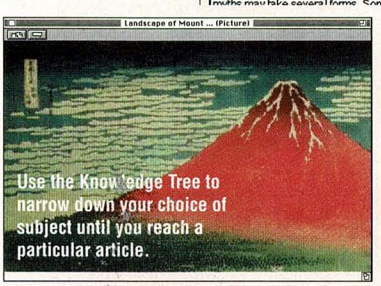
Grolier's sophisticated word search facility uses a principle called Boolean logic, devised by mathematician George Boole in the nineteenth century. Look him up in the encyclopaedia!



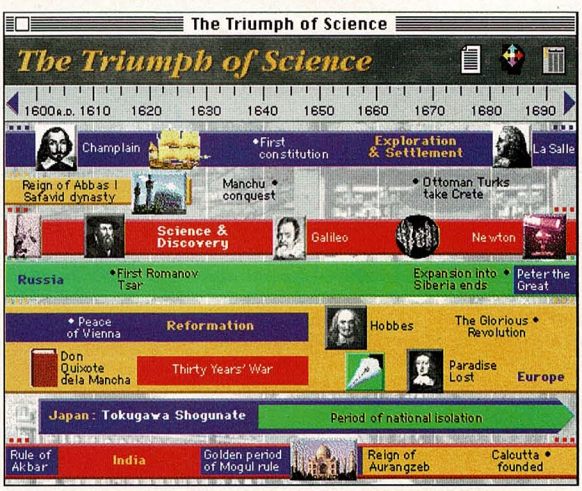
Use the Picture Search facility on the main screen just to browse through images.


mythology
mythology
Myths are stories that narrate in an imaginative and symbolic manner the total and basic structures upon which a culture rests. Given this emphasis on what is fundamental to cultural meaning and value, the myth may appear to be fantastic and bizarre, because the mythic story cannot be explained in the terms of the ordinary conventions of the culture. In fact, the ordinary conventions of the culture are understood as having their origins in the myth.
The term mythology may describe a certain body of myths, for example, Greek, African, or Scandinavian, or it may refer to the study of myths. The study of
Egyptian Sun god wi... (Picture)

Many articles give you a list of related selections, whether they're pictures or simply other articles.


Landscape of Mount ... (Picture)
Use the Knowledge Tree to narrow down your choice of subject until you reach a particular article.

The most useful search options in *The Grolier* are the Knowledge Tree and Word Search.



See what was happening worldwide at any point in history using the Timeline.

GROLIER

Price: £74.99. **Out:** Now.
Requires: LCII or better, 4Mb of RAM, System 7 or later, 16-colour monitor, 5Mb of hard disk space, CD-ROM drive.
Contact: Softline on 0181 401 1234.

MACFORMAT RATING **87%**

Continued on next page

Compton's Interactive Encyclopedia

The printed version of *Compton's* amounts to 26 volumes. The CD-ROM version comes on one disc. Just think how much shelf space you're saving.

LOOK IT UP

CIE is supported by *Webster's Intermediate Dictionary*. It contains more than 65,000 entries, including pronunciation help, variant spellings, synonyms and etymologies. All in living American, sadly.

According to *Compton's Interactive Encyclopedia*, 'Cricket is a relatively leisurely game of great skill played outdoors in attractive surroundings.' Tell that to any number of English batsmen hospitalised by West Indian bowlers this summer. As you may have already guessed, *Compton's* is American.

Featuring over 35,000 articles and more than 100 QuickTime videos, *Compton's* can't be accused of lacking content. To further labour the point, over 9,000,000 words are contained in *Compton's* – remarkably, all in the right order too. Impressive.

You usually use a CD-ROM encyclopaedia for one of two reasons: to gain access to a specific point of reference, or to browse on subjects of a more general interest. *Compton's* entry paths and navigational tools give you a smooth ride to achieve either purpose.

The opening screen contains a paths palette, which is where you choose from the different entry paths available. These are simple and intuitive to use, including: Idea Search, where you enter a subject you have in mind; the Articles path, where the entire body of articles in *Compton's* is listed; the Atlas, which neatly accesses any location in the world and places it in the centre; Timeline, a chronological look at world history; and Topic Tree, which groups together related topics. There are also separate paths listing all the pictures, sounds and QuickTime movies. And to further comfort your journey you can use *Compton's* hypertext and cross-references.

Once you've found what you were looking for, the quality of the information is first class, but it's very American. There's nothing wrong with the information itself – the text reads well, the video clips are an interesting distraction and the maps and graphs are well thought out. But it's written from an American perspective, and is designed to meet the needs of American Mac users. If you can handle that, it more than adequately meets your encyclopaedic needs.

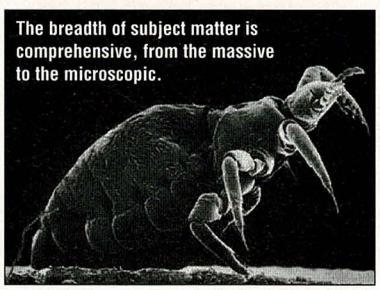
GARY TIPP

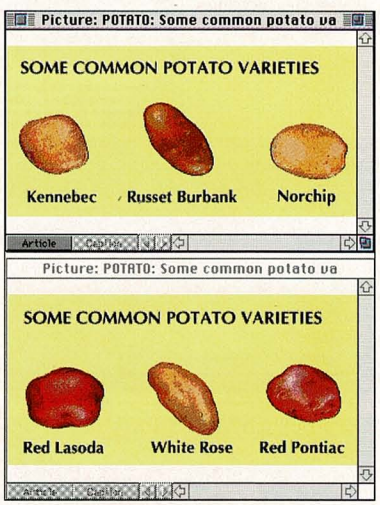
VIRTUAL WORKSPACE

When you open *Compton's* and first start working with it, the workspace is the size of one screen. If you activate the Virtual Workplace facility, you can open and arrange the windows you need, then save your work as a layout.

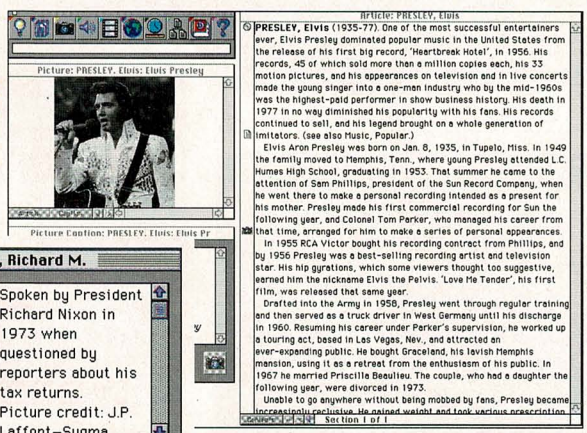
Picture: BOSCH, Hieronymus: Hieronymu
Picture Caption: BOSCH, Hieronymus: Hi
Hieronymus van Aeken Bosch (1450?-1516), Dutch. VISION OF TONDALYS. 1485-95. Oil on wood. 53 cm x 72 cm. Denver Art Museum, Denver, Colo.

From Hieronymus Bosch to Andy Warhol, the Arts coverage in *Compton's* is impressive.

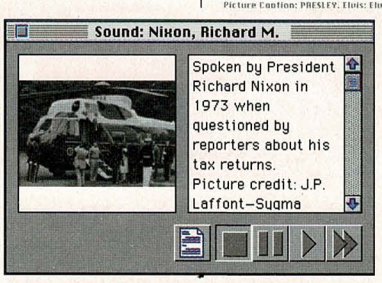




From the momentous to the commonplace, *Compton's* is an invaluable reference tool.

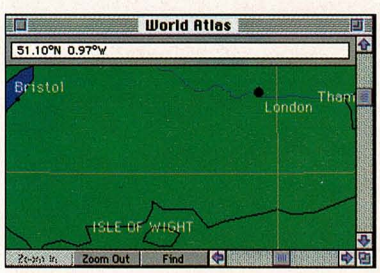

Picture: PRESLEY, Elvis: Elvis Presley
Article: PRESLEY, Elvis
PRESLEY, Elvis (1935-77). One of the most successful entertainers ever, Elvis Presley dominated popular music in the United States from the release of his first big record, 'Heartbreak Hotel', in 1956. His records, 45 of which sold more then a million copies each, his 33 motion pictures, and his appearances on television and in live concerts made the young singer into a one-man industry who by the mid-1960s was the highest-paid performer in show business history. His death in 1977 in no way diminished his popularity with his fans. His records continued to sell, and his legend brought on a whole generation of imitators. (see also Music, Popular.)
Elvis Aron Presley was born on Jan. 8, 1935, in Tupelo, Miss. In 1949 the family moved to Memphis, Tenn., where young Presley attended L.C. Humes High School, graduating in 1953. That summer he came to the attention of Sam Phillips, president of the Sun Record Company, when he went there to make a personal recording intended as a present for his mother. Presley made his first commercial recording for Sun the following year, and Colonel Tom Parker, who managed his career from that time, arranged for him to make a series of personal appearances.
In 1955 RCA Victor bought his recording contract from Phillips, and by 1956 Presley was a best-selling recording artist and television star. His hip gyrations, which some viewers thought too suggestive, earned him the nickname Elvis the Pelvis. 'Love Me Tender', his first film, was released that same year.
Drafted into the Army in 1958, Presley went through regular training and then served as a truck driver in West Germany until his discharge in 1960. Resuming his career under Parker's supervision, he worked up a touring act, based in Las Vegas, Nev., and attracted an ever-expanding public. He bought Graceland, his lavish Memphis mansion, using it as a retreat from the enthusiasm of his public. In 1967 he married Priscilla Beaulieu. The couple, who had a daughter the following year, were divorced in 1973.
Unable to go anywhere without being mobbed by fans, Presley became
Section 1 of 1

Over 32,000 articles are included, which you can access in tandem with the relevant pictures.


Sound: Nixon, Richard M.
Spoken by President Richard Nixon in 1973 when questioned by reporters about his tax returns.
Picture credit: J.P. Laffont-Sygma

There are stored sound excerpts from famous speeches, and some infamous ones too!

The entry paths are found on a palette located on the opening screen.



With the Atlas you can visit anywhere on earth.

COMPTON'S INTERACTIVE

Price: £69.99. **Out:** now.
Requires: LC or better, 4Mb of RAM, System 7.0 or later, CD-ROM drive. Colour monitor recommended.
Contact: Philips on 0171 911 3097.

MACFORMAT RATING 70%

The Guinness Encyclopedia

The newcomer to the Mac encyclopaedia field offers you two discs, yet is half the price of its rivals. Is *Guinness* the bargain of the bunch, or too good to be true?

All CD-ROM encyclopaedias attempt to fit an impossible amount of material onto a disc, but *The Guinness Encyclopedia* has even bigger ambitions. Taking up nearly two CD-ROMs, but with a price tag that's less than half its rivals', its publishers are clearly keen to make a splash.

The first disc contains the encyclopaedia proper. The contents are divided into 11 sections, including the arts, history, technology, biology and even the world today. *Guinness* takes a book-like approach to its presentation, with pages of material you can leaf through sequentially, although other search options are there for when you might need them.

Each page is crammed onto the screen, with specific areas for main controls, text, pictures and captions. However, they're all on the screen, all the time, and you can't change the size of any of them. All CD-ROM encyclopaedias must address the problem of fitting an enormous amount of information onto the screen somehow, but this is a particularly inelegant solution. If you have a larger screen (17 inches plus) you can use another version of the encyclopaedia, but most people will have to suffer.

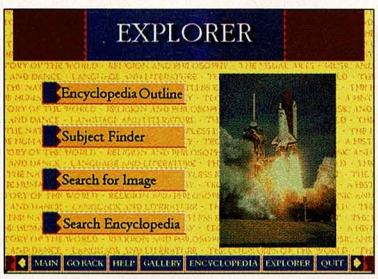
Perhaps by way of compensation, *Guinness* has another, more ingenious, method of presenting the information – it can read any of the text out loud. The idea is promising, but falls flat because the speech program is so primitive. Top marks for initiative, though.

The text is well written, with the sort of direct, broad style you can find in good children's reference books. And it doesn't just present you with the facts – it offers perspective too. The images do a good job, with some contemporary selections among the stock pictures, but the scrappy design of the program lets the material down. And your sense of disappointment is amplified when you load up the second disc, which is a hotch-potch, containing a crude atlas with photos and videos from the NASA archive. You get the feeling the material was bunged onto the disc simply because it was available, and there's no sense of integration with the rest of it.

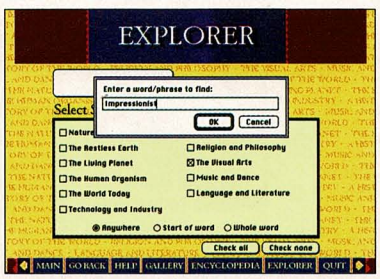
The Guinness Encyclopedia is full of features, but the makers haven't done anything to make it particularly easy to use. Decent material is spoilt by slapdash design – not so much pure genius as a bit of a mess. **RICHARD HILL**

WE KNOW EVERYTHING

In case you were interested, the word 'encyclopaedia' comes from the Greek 'enkyklios paideia', which means 'circle of learning'. You weren't?



The Explorer offers you different ways of finding what you're looking for. More methods like this would make your life easier.

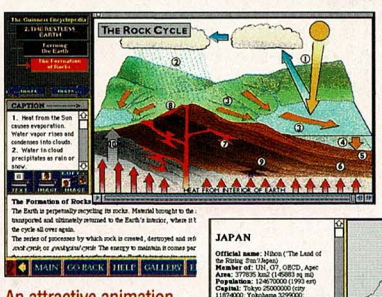


The Word Search facility only allows you to look for one word or phrase. You can use it to search one chapter, or a few, rather than the whole disc...

The Guinness Encyclopedia
9. THE VISUAL ARTS
Early Art
Chinese and Japanese Art
...more
more...
CAPTION
Hokusai's The Wave, an Ukiyo-e print from the Edo period.
TEXT
IMAGE
COPY IMAGE
© Archiv für Kunst und Kirchliche
post-impressionist painters of the West. Sculptural art was now often directed towards miniatures such as netsuke carving - ornamental toggles used to fasten purses or tobacco pouches to garments - but lacquer ware, often decorated with gold dust, flourished as did ceramics. By the late 19th century European influence began to transform Japanese art and many of its native traditions had exhausted themselves.
See Also: click to access
• CHINA TO THE COLONIAL AGE
• JAPAN TO THE 20TH CENTURY
• BUDDHISM
• RELIGIONS OF CHINA AND JAPAN
• THE LITERATURE OF ASIA
MAIN GO BACK HELP GALLERY ENCYCLOPEDIA EXPLORER QUIT

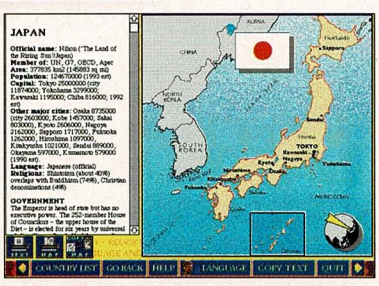
...which is just as well, because it takes its own sweet time looking. You also have to go through each page until you find the one you want – which uses up more time.

The Guinness Encyclopedia
9. THE VISUAL ARTS
Film
World Cinema
...more
more...
CAPTION
Hugh Grant and Andie MacDowell (right) in Four Weddings and a Funeral (Mike Newell, 1994). This romantic English
1984) have been typical international productions, although a more indigenous cinema continues with films such as Bill Forsyth's (1947-) Gregory's Girl (1980) and Mike Newell's (1942-) Four Weddings and a Funeral (1994). Away from the mainstream, Peter Greenaway (1942-) launched a series of idiosyncratic cinematic puzzles with The Draughtsman's Contract (1982); while Derek Jarman (1942-94) explored gay sexuality in films like Sebastiane (1976) and Caravaggio (1986).
See Also: click to access
• PHOTOGRAPHY AND FILM
• RADIO, TELEVISION AND VIDEO
• SILENT FILMS
• HOLLYWOOD
• HOW A FILM IS MADE
MAIN GO BACK HELP GALLERY ENCYCLOPEDIA EXPLORER QUIT


THE ROCK CYCLE
CAPTION
1. Heat from the Sun causes evaporation. Water vapour rises and condenses into clouds.
2. Water in cloud precipitates as rain or snow.
The Formation of Rocks
The Earth is perpetually recycling its rocks. Material brought to the
transported and ultimately returned to the Earth's interior, where it
the cycle all over again.
The series of processes by which rock is created, destroyed and reb
and over, or analysis over. The energy to maintain it comes per
MAIN GO BACK HELP GALLERY

The Guinness Encyclopedia casts a wide net for topics, and includes up-to-date pictures.

An attractive animation with caption numbers – but you have to look at a tiny box to read them.


JAPAN
Official name: Nihon ('The Land of the Rising Sun') Japan
Member of: UN, G7, OECD, Apec
Area: 377835 km2 (145883 sq mi)
Population: 124670000 (1993 est)
Capital: Tokyo 25000000 (city 11874000, Yokohama 3299000, Kawasaki 1195000; Chiba 816000; 1992 est)
Other major cities: Osaka 8735000 (city 2663000; Kobe 1497000; Sakai 803000, Kyoto 2606000, Nagoya 2162000, Sapporo 1717000, Fukuoka 1262000, Hiroshima 1097000, Kitakyushu 1021000, Sendai 899000, Okayama 597000, Kumamoto 579000 (1990 est).
Language: Japanese (official)
Religions: Shintoism (about 4048) overlaps with Buddhism (7048), Christian denominations (498)
GOVERNMENT
The Emperor is head of state but has no executive power. The 252-member House of Councillors – the upper house of the Diet – is elected for six years by universal
TOKYO
COUNTRY LIST GO BACK HELP LANGUAGE COPY TEXT QUIT

The second disc contains an atlas and a factbook. It doesn't quite gel, though.

GUINNESS ENCYCLOPEDIA

Price: £34.99. **Out:** now.
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EMERALD Creative Technology

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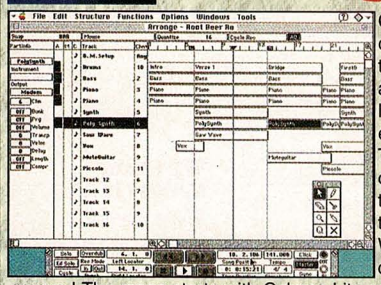

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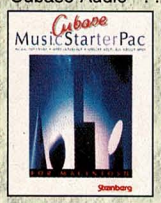

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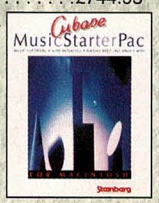

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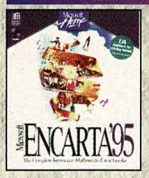

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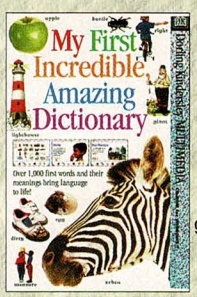

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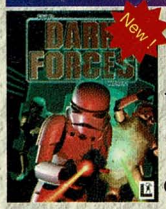

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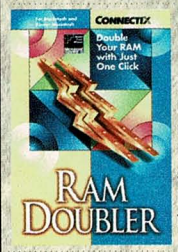

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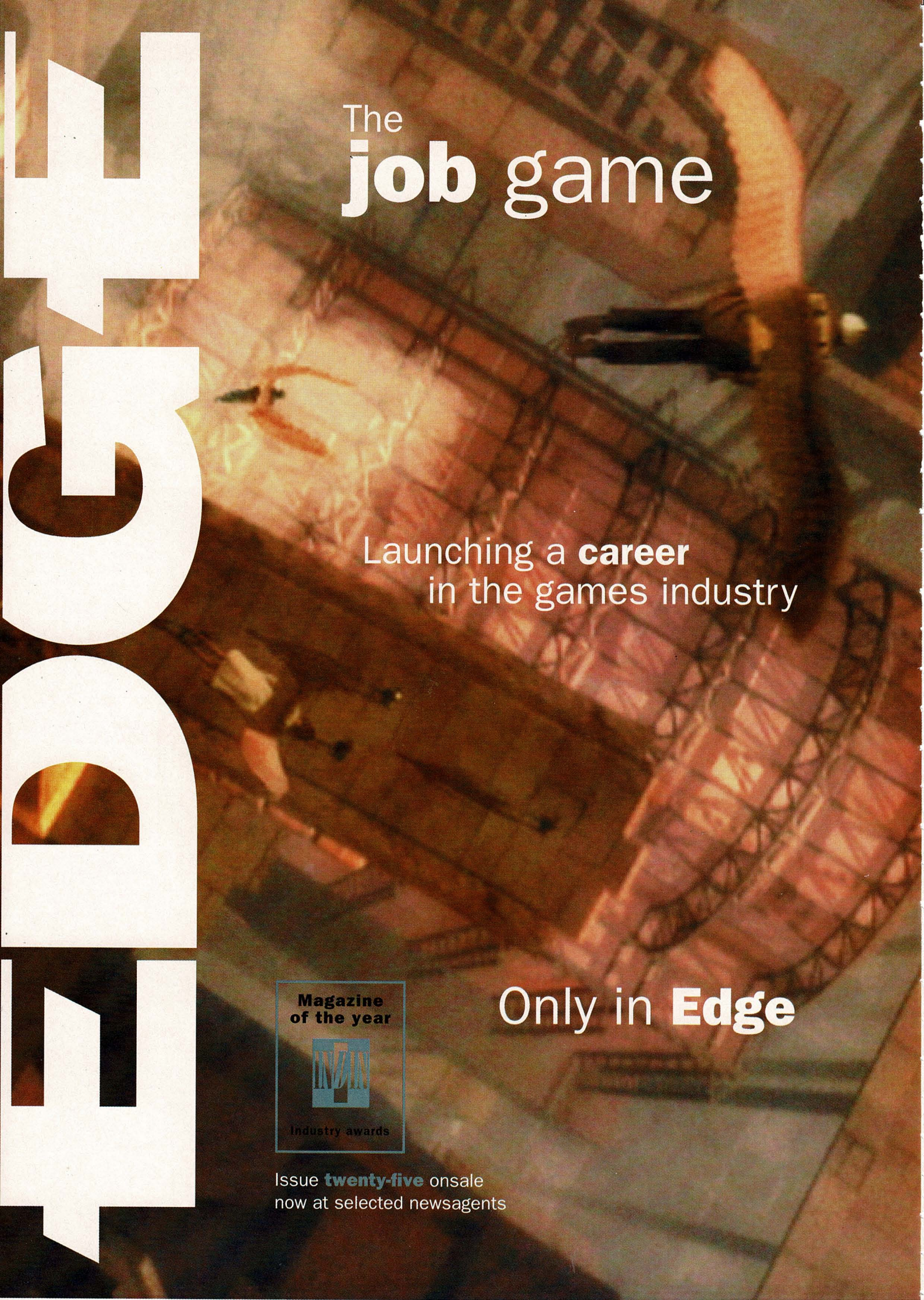
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Stowaway

Seeking out the stowaway in an 18th century ship sounds like a great way of getting your kids to learn some history.

In these days of 767 jet liners and the Channel Tunnel, it's easy to forget that until the end of the last century it was the navy that put the great into Great Britain, and that maritime culture was so prominent in this country.

If you want to teach your youngsters about what it was like in the days of galleons and man o' war battleships, *Stephen Biesty's Incredible Cross-Sections Stowaway* is devoted to revealing the ins and outs of the great timber hulks that sailed the oceans in the 18th and 19th centuries.

The disc attracts and retains your child's attention by setting him or her the task of finding the stowaway, who's concealed in various locations around the ship. Naturally, the hidden agenda is to educate the child about what it must have been like aboard a ship in those 'yo-ho-ho and a bottle of rum' times. But as far as historical content goes, *Stowaway* avoids an old school approach – dates, names and facts are right out. This disc is about sounds and smells; about people, and what they did on ships; and about the perils faced by the heroes and scoundrels who sailed the high seas.

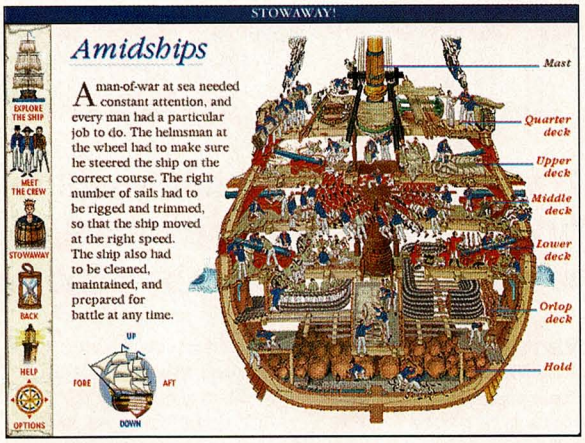
The word 'incredible' isn't in the title just to fill space either. The amount of detail in Stephen Biesty's cross-section drawings really is pretty incredible. The planks are all textured, you can see rats scurrying from the crevices, and in every scene there is lots going on for the crew to deal with.

Unfortunately, there's less interactivity in *Stowaway* than there is in Dorling Kindersley's *Eyewitness* range. Sure, you can navigate your way along the ten cross-sections of the ship, or move up and down through the decks, but it still works much like a book. With each screen, there are two or three hot spots you can click on, which call up new screens that go into greater detail, but from these you just backtrack to where you were. If you're on the quarterdeck and near the stern, for instance, you see officers doing navigational things. From there you can jump out to find out about the use of sextants, the steering of the ship or the administration of discipline (with regular beatings). Admittedly, each sub-screen you call up brings appropriate sounds and some animation, but it's not as fluid or enticing as it could be. In fact, it gets to be a bit of a plod after a while.

The Meet the Crew section of *Stowaway* takes an even more book-like approach. You're presented with a bunch of naval chaps like the midshipman, the admiral, the surgeon and the purser. When you select one of them, you get an on-screen journal of about 20 pages covering their duties. The information is there, but it seriously lacks interactivity and multimedia extras that might liven it up.

Still, there's enough fun in chasing the stowaway to keep kids exploring the ship for several hours. With lots of belching, farting, defecating, rat swatting and slapstick accidents going on in the animations, plus some detailed and interesting information in the text captions, it's light-hearted and educational at the same time. It would take hours and hours to get through everything on the disc. On the other hand, a child could learn as much reading *Treasure Island*, and his or her imagination would interact with the contents just as much.

GARRICK WEBSTER


STOWAWAY!
Amidships
A man-of-war at sea needed constant attention, and every man had a particular job to do. The helmsman at the wheel had to make sure he steered the ship on the correct course. The right number of sails had to be rigged and trimmed, so that the ship moved at the right speed. The ship also had to be cleaned, maintained, and prepared for battle at any time.
Mast
Quarter deck
Upper deck
Middle deck
Lower deck
Orlop deck
Hold
EXPLORE THE SHIP
MEET THE CREW
STOWAWAY
BACK
HELP
OPTIONS
UP
FORE
AFT
DOWN

The detail in the cross-section drawings is incredible. As you can see from this cross-section of the amidships, there's plenty going on. From this screen you can choose to zoom in on any deck you like.

STOWAWAY!
Orlop deck
WANTED
To all members of the CREW of HIS MAJESTY'S SHIP by order of THE CAPTAIN a generous REWARD of a DOUBLED GROG RATION will be given to ANY MEMBER of the crew who reports the whereabouts of a
STOWAWAY
GOD SAVE THE KING
2 3 4 5 6 7 8 9 10
SIGHTINGS

When the stowaway's sighted, his portrait fills one of the empty ovals. That's the idea, anyway. It's supposed to keep your kids interested.

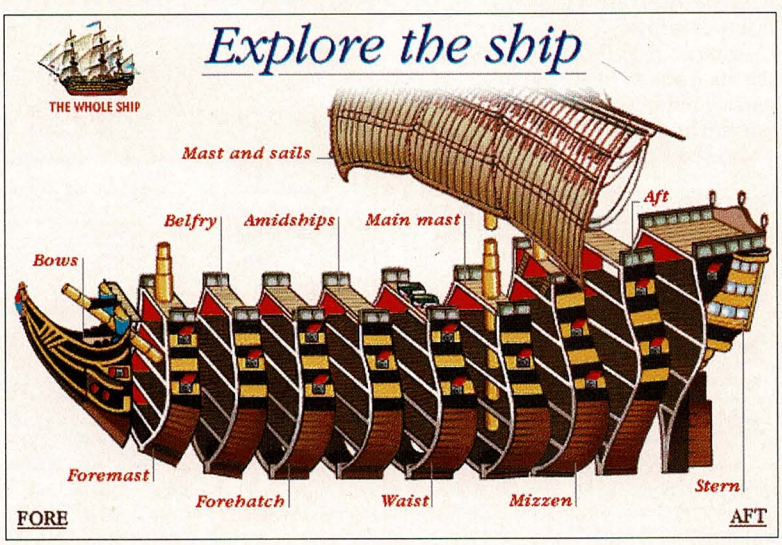
MULTIMEDIA

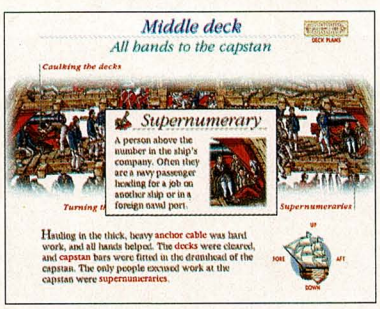
Some people say you need video in a product for it to be truly 'multimedia'. Dorling Kindersley obviously say 'pooh' to that approach. *Stowaway* has 400 screens and pop-ups, 200 mini-animations, two hours of audio and 500 illustrations. Sitting across from Stephen Biesty's artwork, video would be somewhat inappropriate. And anyway, camcorders weren't around in the 18th century.

STOWAWAY

Price: £39. **Out:** now.
Requires: any Mac, 4Mb of RAM, System 7 or later, 256-colour, 14-inch monitor and a CD-ROM drive.
Contact: Dorling Kindersley on 0171 836 5411.

MACFORMAT RATING 73%




Middle deck
All hands to the capstan
Caulking the decks
Supernumerary
A person above the number in the ship's company. Often they are a navy passenger heading for a job on another ship or in a foreign naval port.
Hauling in the thick, heavy anchor cable was hard work, and all hands helped. The decks were cleared, and capstan bars were fitted in the drumhead of the capstan. The only people excused work at the capstan were supernumeraries.

There's not too much narration, although if you click on a word in red, a voice reads it out to you, while the definition is displayed on screen.

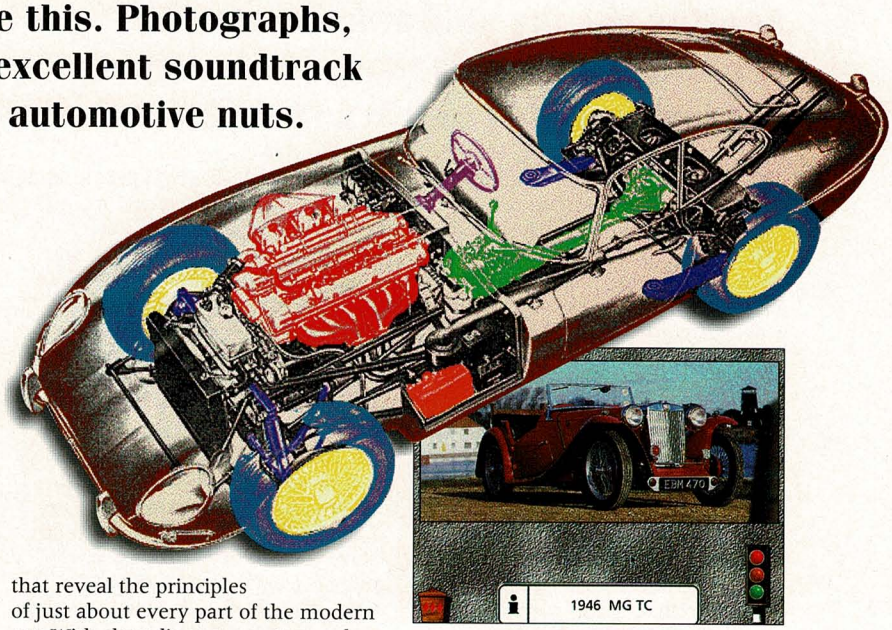
Take one 18th century battleship, add a crew of 200 and sprinkle with farts, fights and slapstick animations. Conceal stowaways in vessel and cut into ten portions. Serve to kids. Dorling Kindersley – everyone's favourite ingredient.

THE CREW

12 crewmen in all are covered in *Stowaway*. These include the surgeon, gunner, captain, midshipman, ship's master, cook, purser, chaplain, bowswain, admiral, marine and seaman. Each has his own tale to tell.

100 Years of Motoring

If you're into cars, then you'll love this. Photographs, history, facts and figures and an excellent soundtrack create a paradise on CD-ROM for automotive nuts.



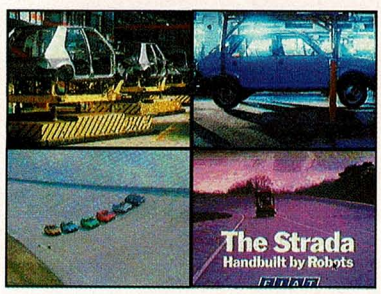
VIRTUAL MEMORY

The instructions tell you to run the software with virtual memory switched off. Now, while it *does* run with VM on, the sound played straight off the CD is, to use a technical term, knackered. Bear this in mind when you're running multimedia software on PowerMacs, as VM is a way of life on these machines.

Produced in conjunction with Beaulieu Motor Museum, *100 Years of Motoring* is slickly made and packed with commentary and music. But, because of a-few flaws in its concept and execution, it might not be slipping into your drive night after night.

You navigate your way around the CD from the main screen – a picture of the inside of a classic sports car. The various sections of the museum are linked to parts of the inside of the car. So, for example, you should click on the speedometer if you want a history lesson. From the close-up of the speedometer dial, you can choose which decade you'd like to examine. Once there, there's plenty to look at, listen to, and read about – pictures of ground-breaking cars of that period, typical car advertisements, biographies of famous car makers, QuickTime movies, period music, commentary and lots of information about the times all keep you amused.

In a similar fashion the other dials in the car's cockpit take you to screens that reveal the principles of just about every part of the modern car. With clear diagrams, notes, and even short animations illustrating how the parts move, the disc conveys some heavy technical concepts in a painless, even entertaining, way.

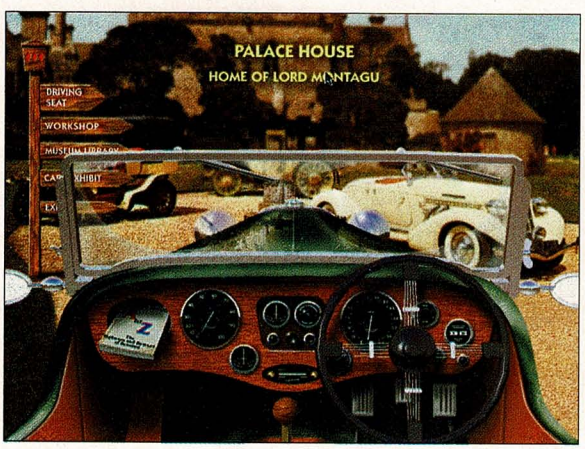


The sights and sounds of the '80s. This classic Fiat Strada TV ad is reproduced in QuickTime video, with the excellent Figaro excerpt.

Then there's all the historical information you'd expect: automotive innovators, land speed record attempts, the cultural and physical impact of cars, that sort of thing. And the core of the program – for genuine car nuts, at least – is the huge library of still photos of classic cars.

But it has its flaws. Although navigating around the disc is straightforward, clicking the U-turn arrow doesn't always take you back to the previous screen. And although the sound is excellent, the instructions don't tell you how to turn it down. You'll be stopping to brush ceiling plaster out of your hair and screw your teeth back into their sockets.

And, being produced in conjunction with the Beaulieu Motor Museum, this isn't really an educational CD. Clicking on the museum building on the main screen treats you to an extended multimedia demo of the museum and its exhibits, culminating with a map showing you how to get there.



The main screen, where you start your multimedia travels. As you move the mouse pointer over the car's instruments and other bits of the picture, a label pops up describing one of the places you can visit. Click to go there.

Enzo FERRARI
b.Modena, Italy, 1898.
• a racing-driver who became a team manager, agreeing to run Alfa Romeo's teams in 1931
• he set up as a constructor in 1946, & won at Le Mans 3 years later: in 1957 he won the world title
• supported by Fiat from the 60s, he then became majority shareholder & boss of Ferrari cars
• uncanny ability in picking drivers, often unknowns

From the library you can find biographies of some of the most important automotive innovators of the past 100 years. Ferrari? Never heard of him.

Pictures of many, many classic cars are included. As well as accessing them from the History section, you can reach an index by clicking on the A-Z in the glove compartment on the main screen.

While the disc has been put together with polish, there is a taste of commercialism and superficiality too. The educational and historical material is good, but not enough to earn it a place on your reference shelves. And after about an hour of clicking and marvelling, you'll have seen just about all there is to see. *100 Years of Motoring* is a superb piece of interactive multimedia entertainment, but it has at least as much gloss as substance and isn't a long-term purchase. **ROD LAWTON**

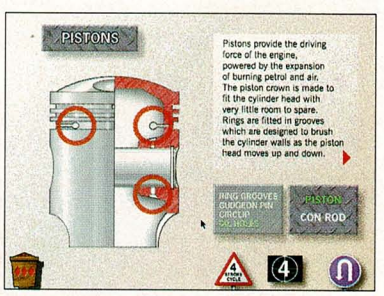
ANATOMY LESSON

The Anatomy of an Engine section answers questions about pistons, valves, exhausts, carburettors, spark plugs, crankshafts, oil, fuel and water. It fails to answer one very specific question about Rod's car, though: why he bought it.

100 YEARS OF MOTORING

Price: £49.95. **Out:** now.
Requires: LCII or better, 4Mb of free RAM, System 7.0 or later, 256-colour monitor, double-speed CD-ROM drive.
Contact: Plum Productions on 01590 612443.

MACFORMAT RATING 72%


PISTONS
Pistons provide the driving force of the engine, powered by the expansion of burning petrol and air. The piston crown is made to fit the cylinder head with very little room to spare. Rings are fitted in grooves which are designed to brush the cylinder walls as the piston head moves up and down.
PISTON
CON ROD

The diagrams are excellent, the notes clear and concise. There are also movies and animations to show you how the bits of your car work.

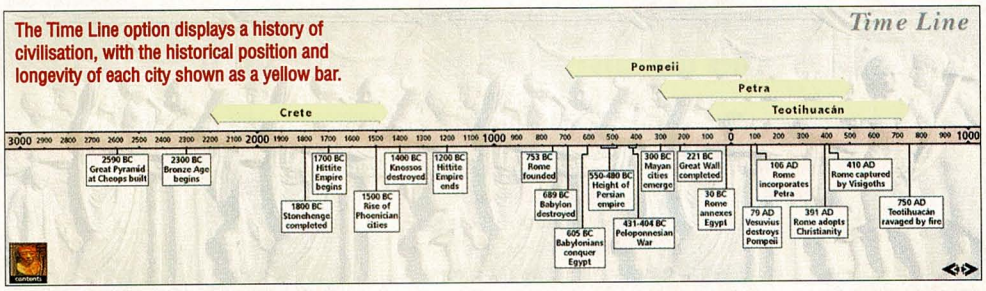
Exploring Ancient Cities

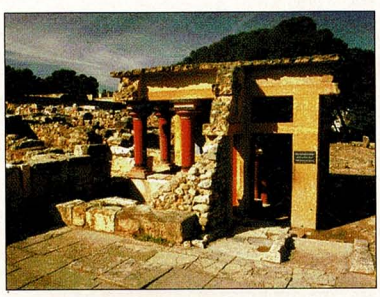
Ancient civilisations have long been a source of fascination – spectacular, mysterious and steeped in legend. But can all that be captured on CD-ROM?

Exploring Ancient Cities offers the standard cocktail of music, voice-overs, QuickTime video and lush photography that you've come to expect from '90s multimedia software. But this disc really fails to do justice to what is undoubtedly a fascinating subject to many people.

You're invited to take a tour around four ancient cities – Crete, Petra, Pompeii and Teotihuacán – and as well as written notes, you can also listen to a commentary as you go along. Of course you can't actually walk around the cities. Instead, certain words and phrases are underlined, and you just click on them to call up a related photograph, which you can display at full screen size. Certain photographs also come with a short slideshow, with captions. These four 'tours' take 20 to 30 minutes each to complete.

In typical multimedia style, there are many other ways of finding your way around the information on the disc. You can also choose any of the slideshows directly from a menu, for example, and each city has a 'grand tour' slideshow. And there are city maps, which indicate public buildings, private houses, city walls and more – with some pictures.


Time Line
Pompeii
Petra
Crete
Teotihuacán
3000 2900 2800 2700 2600 2500 2400 2300 2200 2100 2000 1900 1800 1700 1600 1500 1400 1300 1200 1100 1000 900 800 700 600 500 400 300 200 100 0 100 200 300 400 500 600 700 800 900 1000
2590 BC Great Pyramid at Cheops built
2300 BC Bronze Age begins
1800 BC Stonehenge completed
1700 BC Hittite Empire begins
1500 BC Rise of Phoenician cities
1400 BC Knossos destroyed
1200 BC Hittite Empire ends
753 BC Rome founded
689 BC Babylon destroyed
605 BC Babylonians conquer Egypt
550-480 BC Height of Persian empire
431-404 BC Peloponnesian War
300 BC Mayan cities emerge
221 BC Great Wall completed
30 BC Rome annexes Egypt
79 AD Vesuvius destroys Pompeii
106 AD Rome incorporates Petra
391 AD Rome adopts Christianity
410 AD Rome captured by Visigoths
750 AD Teotihuacán ravaged by fire
contents
The Time Line option displays a history of civilisation, with the historical position and longevity of each city shown as a yellow bar.


The written text is accompanied by numerous photographs. Just click on the thumbnails to see full-screen shots like this one, taken in Crete.

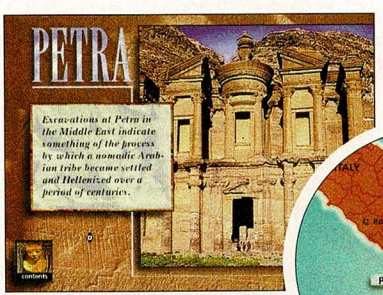
Lush but stuttery

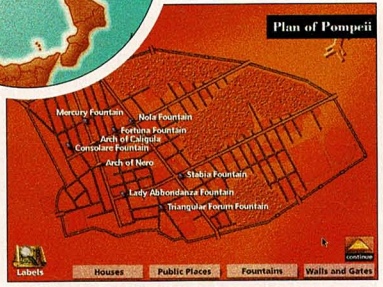
Exploring Ancient Cities looks lush, and works well as a research tool for students, or as entertainment for older members of the family. But underneath the gloss, some of the gears don't mesh too well.

For a start, *Ancient Cities* requires 6Mb of RAM, which means you really need 12Mb or more on your Mac. You *can* run it under virtual memory, but QuickTime videos that run directly from the CD become stuttery, with bad, jerky sound. Also, many of the pictures take an age to load, and the screen changes are none too quick – even when running from a quad-speed CD-ROM drive. To be fair, this might be because we had to run the disc from virtual memory, and allowances must be made, but still... Then there's the problem that, despite the multimedia polish that's been applied, the underlying material is worthy rather than spectacular. The printed notes are inclined to be on the dull side. They are in large readable type, but there are no sub-headings or other diversions to give you a break. You need to really be into ancient cities to plough through them all.

This is an interesting disc with a fair amount of depth, but it's not really entertainment, and the quality of the photography and written matter is only mediocre. *Exploring Ancient Cities* ultimately feels like a re-packaging of previously published material – and there's the rub.

ROD LAWTON


PETRA
Excavations at Petra in the Middle East indicate something of the process by which a nomadic Arabian tribe became settled and Hellenized over a period of centuries.
contents



You explore each city via a screen like this (left). Text and photographs follow the QuickTime intro.

You can progressively zoom in on the ancient cities you want to explore, right down to a detailed overhead street plan (below).

ANCIENT CITIES

Price: £58.69. **Out:** now.
Requires: LCII or better, 6Mb of RAM, System 7.0 or later, 256-colour 13-inch monitor, double-speed CD-ROM drive.
Contact: WH Freeman on 01865 726975

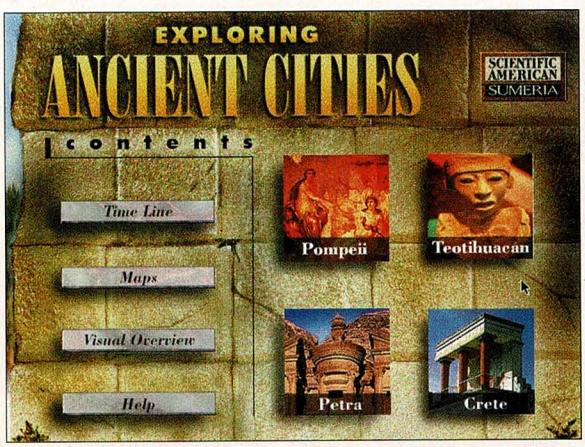
MACFORMAT RATING 69%

THANKS FOR THE MEMORY

...or not, in this case. A RAM requirement of 6Mb is a lot, though not unusual for multimedia software. You can use virtual memory, but you'll get glitchy images and interrupted sound.

A QUICK MAKE-OVER?

Some multimedia software is scripted from scratch, the material purpose-made for interactive presentation. Other software consists of existing material, with some new links and a few multimedia tricks to liven it up. Beware of 'multimedia' versions of previously published material – they tend to be duller and slower to look through.



The main screen. From here you can jump straight to the historical Time Line, look at the maps, look at an overview of the CD-ROM or jump to the Help documentation. Or you can go straight to each city for your guided tour.

Bernard of Hollywood's Marilyn

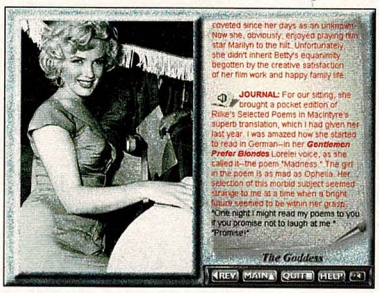
Marilyn Monroe

Marilyn was the ultimate sex symbol. But does this CD, compiled from the photos and journals of the man who discovered her, do her justice?

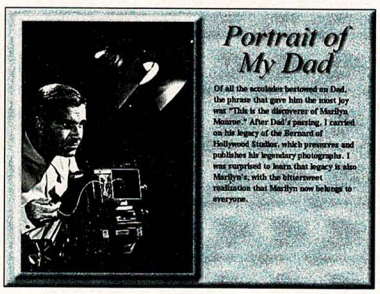
The main screen gives you access to the different sections of the CD. Unfortunately, it's organised just like a book, although the pics are fabulous.

Although some of the producers and studio bigwigs who exploited Marilyn Monroe during her Hollywood career thought she was an illiterate blonde bimbo, in fact she was a lover of books and reading. She took out her first credit account with a bookshop, enjoyed poetry and discussed literature with those closest to her.

Perhaps, as the tragic starlet loved books so much, she would also have liked *Bernard of Hollywood's Marilyn*. After all, this disc really isn't much more than a coffee table book presented on CD-ROM. It's even based on a book of the same name.


coveted since her days as an unknown. Now she, obviously, enjoyed playing film star Marilyn to the hilt. Unfortunately, she didn't inherit Betty's equanimity, begotten by the creative satisfaction of her film work and happy family life.
JOURNAL: For our sitting, she brought a pocket edition of Rilke's Selected Poems in Macintyre's superb translation, which I had given her last year. I was amazed how she started to read in German—in her Gentlemen Prefer Blondes Lorelei voice, as she called it—the poem "Madness." The girl in the poem is as mad as Ophelia. Her selection of this morbid subject seemed strange to me at a time when a bright future seemed to be within her grasp.
"One night I might read my poems to you if you promise not to laugh at me."
"I promise!"
The Goddess
REV
MAIN
QUIT
HELP

Much of the disc is made up of screens like this. Any red text is read out for you, and little icons indicate paths to other sections.


Portrait of My Dad
Of all the accolades bestowed on Dad, the phrase that gave him the most joy was "This is the discoverer of Marilyn Monroe." After Dad's passing, I carried on his legacy of the Bernard of Hollywood Studios, which preserves and publishes his legendary photographs. I was surprised to learn that legacy is also Marilyn's, with the bittersweet realization that Marilyn now belongs to everyone.

Bruno Bernard, the man who discovered Marilyn Monroe. He made her famous, and tried to give her support during her turbulent 16-year career.

THE PHOTOGRAPHER

Bruno Bernard studied criminal psychology before fleeing Nazi Germany. As a penniless refugee he set up a darkroom in Hollywood and began photographing stars. His subjects included Gregory Peck, Rita Hayworth, Clark Gable, John Wayne, Elizabeth Taylor and Tyrone Power.

The disc includes the *Corel ArtView* screensaver. If the disc is in your drive, it flashes up photos of the lady when your Mac goes to sleep.

A few things set it apart from a book, but not many. You can, for instance, watch QuickTime video clips of Marilyn taken from 1950s newsreels. And there's lots of light '50s jazz music, which plays in the background while you use the CD, along with some narration. Finally, there are even a few hyperlinks between certain sections of the disc.

But the CD works more like a book than anything else. Its main feature is a collection of over 100 high resolution photos of Marilyn, taken by Bruno Bernard. The Hollywood photographer brought Marilyn into the limelight, and tried to be her surrogate father during the transition from sweet, naïve Norma Jean to sex symbol Marilyn Monroe. To be fair, the photos are an absolute treat if you're a Marilyn enthusiast, and are pretty darn good even if you're not. But unfortunately, you can't expand any of them to full screen size to zoom in for a closer look.

The photos are organised almost chronologically, and separated into six chapters covering the rise and fall of the voluptuous superstar. Alongside the pictures, there's text written by Susan Bernard, daughter of the photographer, plus loads of excerpts from Bruno Bernard's journals. Whenever a journal note appears on the screen, it's also read out in an annoying fake-sounding German accent, but you spend most of your time paging though, admiring the pictures and reading the text and listening to the narration. It's interesting, but never really digs into the nitty-gritty. If you were hoping to see those nude pin-ups, or find out what happened behind the dressing room door, forget it.

Along the way you get the chance to watch a video or take a look at the Trivia section for interesting little facts on Marilyn. Likewise, from time to time you get to take a look at the Timeline, which is little more than a filmography of her career.

Click on a year in the Timeline and it reveals the films Marilyn made that year, plus the stars, directors and occasional biographical facts.

Altogether, it should take you about three hours to read through the whole disc, even if you look through all the hyperlinks. If you're really interested, you can find out a little background on Bruno Bernard, or dip into the 12 video clips by themselves. These capture some of the poignant moments of Marilyn's life, like her recital of *Happy Birthday* to JFK, but they're generally too grainy, grey and jumpy for you to be able to appreciate them properly.

As it says on the box, *Bernard of Hollywood's Marilyn* is for devoted fans of the woman. But that's not really a good enough excuse. If CD-ROM and multimedia are ever going to offer anything special, publishers have to get away from the traditional paradigms of book publishing. Marilyn was special; unfortunately, this disc is not. But hey, at least when you quit the program Marilyn blows you a goodbye kiss.

GARRICK WEBSTER

MARILYN

Price: £45.83. **Out:** now.
Requires: LCII or better, 8Mb of RAM, System 7 or later, 256-colour monitor, double-speed CD-ROM drive.
Contact: Channel Marketmakers on 01703 814142.

MACFORMAT RATING 59%

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Parlez-vous Français?

No one said learning a language would be easy, but multimedia language packages can certainly help. Rod Lawton stutters through the latest software.

Foreign languages aren't easy to master. There's a huge amount of vocabulary to learn, for a start. The grammatical constructions are different, and popular jargon and contractions throw another multilingual spanner in the works. And then there's the spectre of pronunciation to overcome.

Why multimedia?

Even if you missed out on languages at school, there's no shortage of choice when it comes to language-learning packages – audio packs, videos and books are widely available from dozens of publishers. So what advantages does multimedia Mac software have over other media for learning languages?

The great thing about multimedia software is that it is random access. You can locate and load any video or sound clip in mere seconds, unlike audio cassettes and videos. Using multimedia you can watch a QuickTime movie, then click on an icon to study one of the areas you've seen. You can record your attempts at pronunciation and compare them to your tutor's, go back over the vocabulary, skip to notes on grammatical construction and interact instantaneously with your study material.

The six language programs we've reviewed here are all very different. In each case, though, the interactivity makes traditional video, book and audio-based learning aids look positively antediluvian. Too many of the multimedia products appearing today are simply 'novelty books', but education is an arena where multimedia has real potential. It really is a great way of learning a foreign language.

You want to learn a new language? Multimedia is the ideal educational tool.

How do I sound?

Nearly all language software enables you to record your own pronunciation. This is useful for comparing against an actor's – but bear in mind that no software can mark your pronunciation. That would be a good trick.

What are you getting?

Language software breaks down into two broad categories: complete courses and skill-builders. Skill-builders are designed to supplement a full course, increasing your expertise in specific areas like pronunciation and vocabulary.

Continued on next page

The programs: something for everyone?

■ *Berlitz Think & Talk French* aims to teach you French in the same way as children learn their mother tongue. It takes an informal approach, and helps meet your own personal needs and interests. With the Berlitz range you can also improve your Spanish, German and Italian.

■ *Learn to Speak French* takes more of a school-like approach, with little set scenes followed by vocabularies and exercises in grammar and punctuation. It's the most thorough package reviewed – it helps out with pronunciation and sets tests on all areas. The range also includes English and Spanish editions.

■ *French Pronunciation Tutor* exists solely to improve your spoken French, which it does thoroughly and stylishly. Spanish and German packages are also available.

■ *French Word Torture* is designed solely to improve your vocabulary and French spelling. Unfortunately it deals with these effectively but extremely tediously. You can also torture yourself in Spanish, Italian, German, Russian and Japanese.

■ *The Rosetta Stone* is beginner-friendly. It develops your vocabulary and understanding using pictures and multiple-choice options. It's available in French, German, Spanish, English and Russion, and you can get a Power Pack covering all five languages for £116.33.

■ EuroTalk's *Learn French with Asterix* is a CD-based cartoon strip with pop-up help. You can listen to the dialogue, call up the written equivalent, read an English translation and check out notes on grammar and popular usage. It's not a complete course or a skill builder, but it makes learning entertaining.

All the software, with the exception of *French Word Torture*, enables you to record yourself, then play your speech alongside the proper pronunciation. You can use the built-in microphone on your Mac, or just plug in an external one.

WORTHY... BUT DULL

Educational software varies greatly in presentation. It all depends on the source: sometimes it's a big-league software developer, employing proper design teams; sometimes it's an educational supplier dabbling in multimedia techniques; sometimes it's a shareware author who's found a publisher prepared to take a punt... Standards vary.

Learn to Speak French

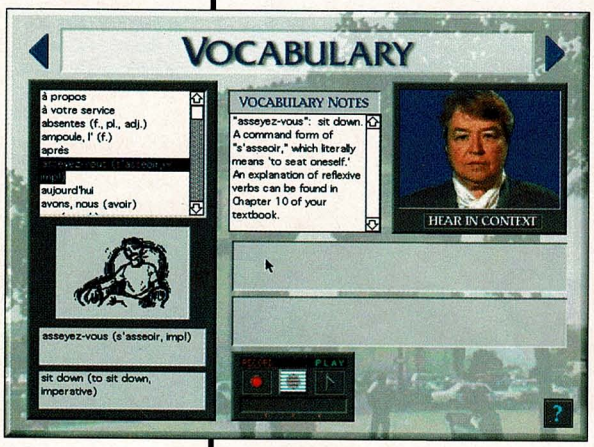
While this package is certainly versatile and exhaustive, it's also just like being back at school. It uses multimedia technology well – with QuickTime clips, animations, vocabulary items you can click on for the correct pronunciation, 30 different themed chapters, progress checks, tests of impromptu communications skills and more – yet it still has that faintly dull and rather worthy air of an upmarket classroom study aid.

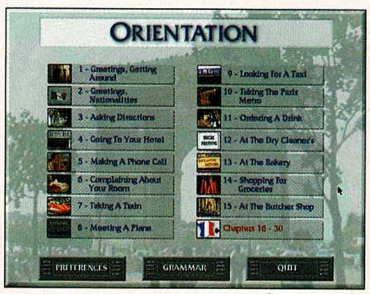
But you're here to learn French, not revel in a multimedia extravaganza, and *Learn to Speak French* is the most thorough and comprehensive French course we looked at in this round-up.

You can view the chapters either by theme (such as travel or shopping), or by the grammatical principles they introduce. You can also quickly go to the last lesson you studied with the Bookmark button.

Each chapter consists of a number of pages, each page having a different activity. On the first page you play a QuickTime movie to set the scene, then on the next you can study the vocabulary used in the chapter, clicking on a word or phrase to hear it being spoken by a talking head in a QuickTime window. Vocabulary notes give you lots of helpful background information. Next you undergo a vocabulary drill, which checks what you've assimilated, then you watch the written story being spoken. Various tests of grammar and pronunciation follow, culminating in a comprehension test in which you have to type one of a number of appropriate responses to specific situations. All of this is backed up by a big, fat paperback study book, where you can read background information and complete written exercises.

You wouldn't call *Learn to Speak French* fun, exactly, but it's an interesting and really very painless way of learning a foreign language.


VOCABULARY
à propos
à votre service
absentes (f., pl., adj.)
ampoule, l' (f.)
après
aujourd'hui
avons, nous (avoir)
VOCABULARY NOTES
"asseyez-vous": sit down. A command form of "s'asseoir," which literally means "to seat oneself." An explanation of reflexive verbs can be found in Chapter 10 of your textbook.
HEAR IN CONTEXT
asseyez-vous (s'asseoir, impl)
sit down (to sit down, imperative)


ORIENTATION
1 - Greetings, Getting Around
2 - Greetings, Nationalities
3 - Asking Directions
4 - Going To Your Hotel
5 - Making A Phone Call
6 - Complaining About Your Room
7 - Taking A Train
8 - Meeting A Friend
9 - Looking For A Taxi
10 - Taking The Paris Metro
11 - Ordering A Drink
12 - At The Dry Cleaner's
13 - At The Bakery
14 - Shopping For Groceries
15 - At The Butcher Shop
Chapters 16 - 30
PREFERENCES
GRAMMAR
QUIT

Learn To Speak French is arranged into a series of chapters, each of which contains a movie, a story and a set of exercises.

LEARN TO SPEAK FRENCH

Price: £163.33. **Out:** now.
Requires: LCII or higher, 4Mb of free RAM, colour monitor, CD-ROM drive, microphone for recording speech.
Contact: Softline on 0181 401 1234.

MACFORMAT RATING 85%

French Pronunciation Tutor

HYPERACTIVE

HyperCard seems to be popular among educational suppliers – sadly. It's not that *HyperCard* isn't powerful enough, but that most educational programmers don't seem to know half the things that *HyperCard* can do.

British schools tend to be good at teaching written French, but spoken French takes a bit of a back seat – yet learning to speak French takes as much effort as learning to write it.

If you have a basic understanding of French grammar, but find speaking French a problem, this program is for you. Unusually for educational software, its interface is not reminiscent of a 1976 Open University broadcast – it's stylish, modern and slick. This doesn't make the educational content any more sound, but it does encourage you to explore it.

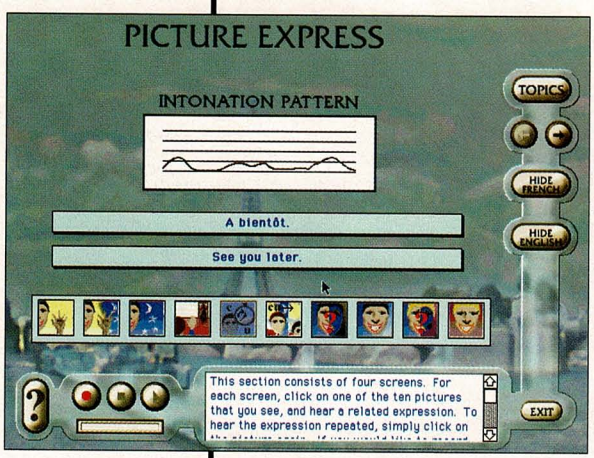
Whatever your pronunciation problems, there are measures here to resolve it. You can carry out a pronunciation check at any time, which records your spoken French both at the start of your course and at various stages throughout it. To help you with the basics, the package includes lessons on pronouncing the letters of the alphabet, the various French vowel and consonant sounds, and accented vowels. It also teaches you all about pairs of words that sound the same, but are spelt differently and mean different things.

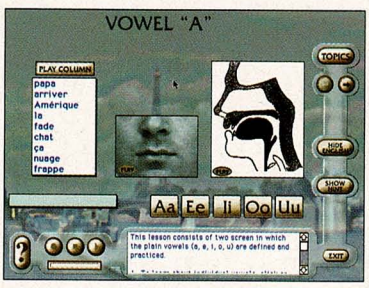
MACFORMAT Classic

And it covers how to pronounce numbers and tell the time.

When it comes to correcting your pronunciation, it's all here. There are animations of the lips and tongue, while graphs indicate stress within a phrase. It's hard to imagine a more complete and structured approach to French pronunciation.

French Pronunciation Tutor isn't a learning package in its own right, but it's a valuable adjunct to something like *Learn to Speak French*, especially if you're having trouble making your French sound like French...


PICTURE EXPRESS
INTONATION PATTERN
TOPICS
HIDE FRENCH
HIDE ENGLISH
A bientôt.
See you later.
This section consists of four screens. For each screen, click on one of the ten pictures that you see, and hear a related expression. To hear the expression repeated, simply click on
EXIT



QuickTime movies and animated diagrams help you grasp the way the French pronounce their words and practise for yourself.

PRONUNCIATION TUTOR

Price: £49.98. **Out:** now.
Requires: LCII or higher, 4Mb of free RAM, colour monitor, CD-ROM drive, microphone for recording speech, digitising hardware.
Contact: Softline on 0181 401 1234.

MACFORMAT RATING 90%

The Rosetta Stone

Instead of borrowing from the traditional classroom, *The Rosetta Stone* reinforces meaning and comprehension by using still images, plus spoken and written French. It does this within a multiple-choice framework that you can customise endlessly to develop your spelling, pronunciation or ability to understand spoken French.

The course is divided into lessons, and starts at a basic level – more basic than any of the others reviewed here – and requires little initial understanding of French.

One of the battles with learning any foreign language is getting you to think in that language. With many teaching methods you tend to revert to your mother tongue to reason something through, then translate it back into the other language to produce an answer. *The Rosetta Stone* attempts to get round this with its use of still images, reinforcing the link between the sound and appearance of the word with the object.

But while it offers lots of ways of tackling each lesson, there are only a fixed number of pictures and phrases to work through, so you'll be getting sick of them by the time you reach your chosen level of proficiency. And while you can record your own voice to check your pronunciation, there are no QuickTime movies or other eye-candy to raise the experience above a purely educational level.

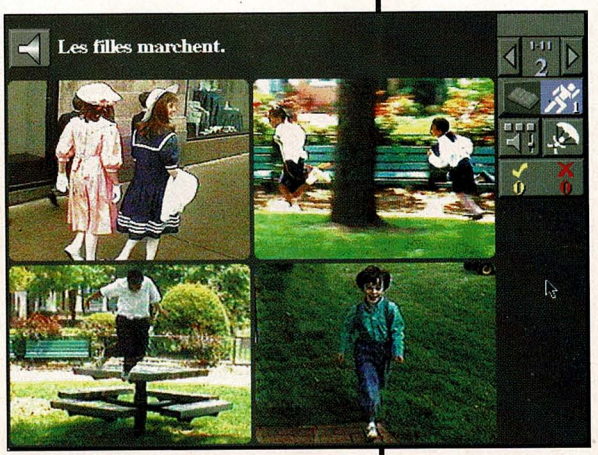
There are no cultural insights or travel hints, either. *The Rosetta Stone* is simply a tool for learning languages. Having said that, it is the easiest course to get into and it keeps you hooked, particularly since the text is initially in short chunks, encouraging you to tackle the pronunciation. As a multimedia experience, it's distinctly flat, but as an educational tool, it's not at all bad. Shallow, but effective.

THE ROSETTA STONE

Price: £236.10 (92 lessons). **Out:** now.
Requires: colour Mac, 4Mb of free RAM, CD-ROM drive and a microphone for recording speech.
Contact: Prestige Network Ltd on 01344 303800

MACFORMAT RATING 81%

You can customise the way *The Rosetta Stone* works from this Options screen, choosing sounds, time limits, tests and more.



STONE ME!

Demo versions of *The Rosetta Stone* are available from a number of sources (unfortunately it was too big to fit on our CD). It's part of some current Macintosh bundles too. Dig out those CD-ROMs gathering dust in a corner, and see if it's among them.

Berlitz Think & Talk French

Traditional methods of teaching language usually concentrate on teaching you to translate words and concepts from one language into another. The Berlitz method tackles language learning differently. Going back to basics, it teaches you the language in much the same way as a young child would learn his or her mother tongue.

This means that you concentrate first on listening to and understanding what's being said to you. To help you with this, the program displays pictures, which change in step with the spoken text. In this phase you hear the correct responses to questions, and practise repeating them yourself.

In the next phase you are allowed to read the same material. Only when you can both recognise and speak the material confidently do you start looking at the spelling and grammar.

The next stage is learning to write the language. Finally, you're encouraged to talk and reply in French without being prompted by the software. The process focuses on developing your ability to think in French and your confidence in expressing yourself with a limited vocabulary.

Think & Talk French is *HyperCard*-based, like *French Word Torture* (reviewed on the next page), but the presentation is in a higher league. Although it doesn't have the same speed and polish as some of the other programs reviewed here, the *HyperCard* front end does a good job of orchestrating the accompanying stills, text and sound bites from the eight (yes, eight!) accompanying CDs.

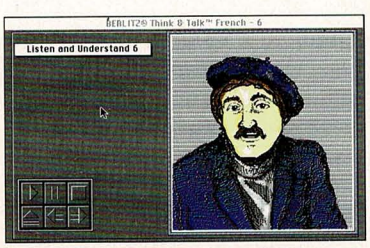
Like *Learn to Speak French*, this is a full-blown French language course, and, while it doesn't have the same depth or academic bias, it is quicker to get into. Whereas you wouldn't bother launching *Learn to Speak French* unless you could put aside an hour and were feeling particularly determined, *Think & Talk French* works as a ten-minute diversion or an hour-long exercise.

Think & Talk French isn't the best-looking language course, but it's the course you're most likely to see through to the end.

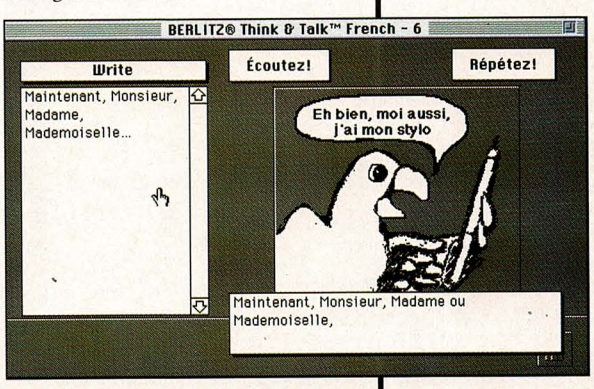
THINK & TALK FRENCH

Price: £117.49. **Out:** now.
Requires: any Mac, 2Mb of free RAM, *Hypercard 2.0* or above, CD-ROM drive, microphone for recording speech.
Contact: Softline on 0181 401 1234.

MACFORMAT RATING 74%



This mode is the starting point – you must listen to what's being said and try to understand what's happening on screen.



WHY...

...do you want to learn French? This will help you choose your learning software. Tourists or business travellers should look out for software (like *Learn to Talk French)* that includes information about customs and cultural background.

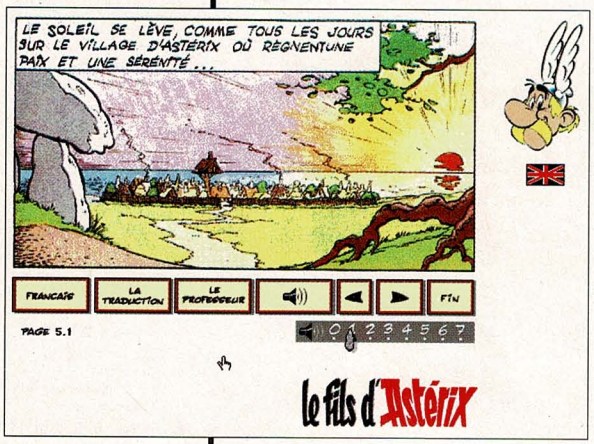
OTHER LANGUAGES

Many of the programs reviewed here are available in other languages too. Even if French isn't your sac (bag), the comments made about the programs largely apply to other versions.

Learn French with Asterix

Asterix is great. The names of the characters are daft yet clever, their adventures are fun and often quite surreal, and the drawings are colourful and humorous. And, of course, they're French. If you'd quite happily sit down and leaf through an *Asterix* adventure, then how about learning some French into the bargain?

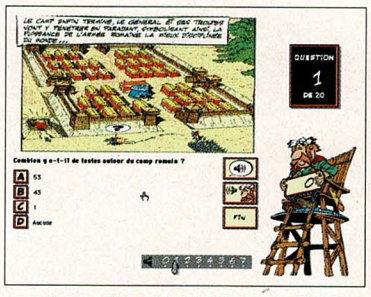
As with all the other programs reviewed here, you need a basic understanding of French to start with – maybe a year of learning it at school. The rest should follow on from there.


LE SOLEIL SE LÈVE, COMME TOUS LES JOURS SUR LE VILLAGE D'ASTÉRIX OÙ RÉGNENTUNE PAIX ET UNE SÉRÉNITÉ ...
FRANÇAIS
LA TRADUCTION
LE PROFESSEUR
FIN
PAGE 5.1
le fils d'Astérix

The idea behind *Asterix* is that you listen to the characters' dialogue to improve your comprehension of spoken French. You are also expected to study the written version of the dialogue, using the English translation, to improve your written French. And you can look up notes on words and phrases used in that scene. There are various permutations of sound, pictures and text, but it all boils down to an interactive audio story book.

The central premise is that you can learn to understand and speak French from listening to it being spoken, which is fine as a concept, but the actors doing the voiceovers really don't help – the Obelix and Asterix characters sound like a pair of bronchitic wildebeest, for a start.

But because it's *Asterix*, you don't feel like you're learning, you feel like you're being entertained. Simple comprehension takes second place to comic drama – you'd probably get a similar comprehension level by exporting *Auf Wiedersehen Pet* to Japan. You call up the written speech bubbles just to react with, 'Oh, so that's what he said!' By looking at the study notes, you eventually begin to match the words up with the sounds you heard, but as an easy way of learning to speak French, forget it. A good idea in principle, but not in practice.



As well as reading and chuckling at the *Asterix* story, you can tackle this quiz, in which the questions and answers are in French.

LEARN FRENCH WITH ASTERIX

Price: £57.78 for each CD-ROM or £89.30 for the full set of two CDs. **Out:** now.
Requires: Quadra or better, 4Mb of free RAM, 8Mb of RAM in total, 256-colour monitor, CD-ROM drive.
Contact: Softline on 0181 401 1234.

MACFORMAT RATING 69%

French Word Torture

MULTIMEDIA MAGIC

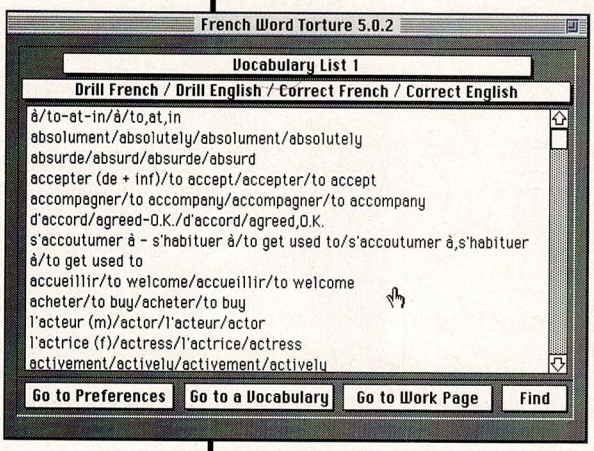
Multimedia technology is a godsend to educational software. These programs knock the traditional methods of language learning (audio cassettes, videos and textbooks) into a cocked chapeau.

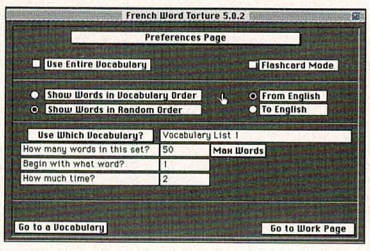
Oh dear, oh dear. There's nothing wrong with the basic principle of this program, which is to test your French vocabulary and spelling. No, that side of it's fine. It's just the execution. Whereas *French Pronunciation Tutor* is a slick, glossy, multimedia extravaganza, this skill-building package is an ugly, clunky, single-media bore.

For a start, it's a *HyperCard* stack. There's nothing wrong with that necessarily – *HyperCard* is an excellent educational tool, and in this instance it manipulates a large selection of French words and phrases, as well as compiling tests and marking the results. The trouble is that dear old *HyperCard* is not at the cutting edge of graphic design. Combine its feeble graphics tools with the author's equally feeble imagination, and you have an on-screen display that belongs in a shareware back-catalogue. Yet *Berlitz Think & Talk French*, also created in *HyperCard*, looks reasonable.

All of which is a shame, because if you can bear to use it, *French Word Torture* is a sound little package. Testing yourself for vocabulary and spelling sounds like a trainspotter activity, but it's still a valuable part of language learning and this program turns it into a brisk and effective exercise. Another downside is that you need a copy of *HyperCard* itself to run *French Word Torture*, despite the fact that the publishers could just as easily have bundled the *HyperCard* player with it, or distributed it as a standalone stack. And even though *HyperCard* doesn't handle colour intrinsically, it can still display colour images – a fact that the author appears to have ignored. And why have the developers built in an alert to tell you when your stack needs compacting? It's the easiest thing in the world to get a stack to compact itself! *[Sorry, he can be a bit of a* HyperCard *bore at times – Ed.]*

This is a fantastically amateurish execution of a worthwhile program. If you can bear to use it, you will actually find it useful.





Want to customise the program for your own needs? There are several options you can tweak. What an interesting screen, huh?

FRENCH WORD TORTURE

Price: £29.99. **Out:** now.
Requires: any Mac, *HyperCard 2.0* or later, astonishing forbearance.
Contact: Softline on 0181 401 1234.

MACFORMAT RATING 25%

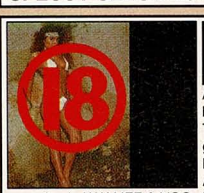
EPIC MARKETING
CD ROM SOFTWARE

Emulators Unlimited contains Software emulation tools for the PC, MAC & Amiga. Spread over various platforms are emulators for: Apple, BBC, Commodore 64, Commodore VIC20, Amstrad CPC, Apple Mac, Gameboy, Atari ST, MSX, Apple200, Atari 800, Atari1040ste, Sinclair QL, Unix and more. Also features hundreds of games, tools and demos for use with most of the emulators.

EMULATORS UNLIMITED (CD117) £19.99

Retro gaming at it`s best. Over 3000 all-time classic spectrum games on one CD-ROM. Emulators included for the Amiga, Mac, Atari ST & PC (dos & Windows). Games include Manic Miner, Skool daze, Monty mole, Startrek, Thrust, Jet Set Willy, The Hobbit, Strip Poker, Danger Mouse, The Sentinel, Micro Olympics, Under Wurlde, Uridium, Atic Atac, River raid, Barbarian, Hunchback and over 3000 other classic spectrum-48 games. Speccy part deux also contains hundreds of documents containing instructions for most games aswell as hundreds of speccy game cheats. Suitable for all platforms but requires the use of keyboard to play the games. AVAILABLE NOW.

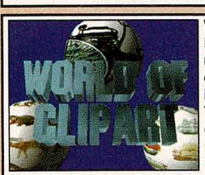
SPECCY SENSATION Part Deux (CD119) £17.99



ADULT SENSATION 2 THE NEW BATCH

Adult Sensation 2 features a whole new batch of exciting new Adult material including Thousands of graphic images, hundreds of Adult/sexy sound samples in WAV,IFF & VOC, Adult stories, Comical sketches, Hundreds of Adult jokes, Dozens of either weird,sick or adult animations in FLI & ANIM. Adult sensation 2 also contains around a dozen original adult music modules that feature sexy samples. This is definitely not one for the faint hearted... (OVER 18 ONLY!!!)

ADULT SENSATION 2 The new batch (CD115) £19.99



World of Clipart is a double CD-ROM containing around 40,000 mono and colour clipart images contained in over 100 catagories in IFF, GIF, PCX, CDR, EPS, TIF, & BMP. Perfect for giving your documents a more professional finish. Subjects include : Animals, Anatomy, Babies, Men, Women, Trees, Reptiles, Insects, Xmas, Religious, Planes, Vehicles, Ships, Toys, Zodiac signs, Eye catchers, Humour, Cats, Dogs, Computers, Technology, Sealife, Space, Symbols, Royalty, Dinosaurs, Plants, Nature, Ads, Tools, Astrology, Hands, Birds, Business, Office, Workers, Cartoon, Lion King, Education, Food, Gardening, Holidays, Houses & Buildings, Helicopters, Children, Banners, Medieval, Military, Monsters, Music, Sports (football, golf, Aerobics, Olympics, etc), Transport, Trains, War and more.

WORLD OF CLIPART *Plus* DOUBLE CD (CD77) £19.99

Hundreds of classic Sports bloomers from boxing to racing, The horses, Wrestling, Motor Cycles etc. All clips are viewableon MAC. All movies were captured using statre of the are video capture equipment. So all the scetches are of the highest possible quality. All clips are "public domain" so you can do as you please with them.....

HILARIOUS SPORTS BLOOMERS (CD142) £12.99

Lemmings and Oh no more Lemmings. This IS the Best & most addictive arcade/ mind game ever produced. Features 200 increasingly difficult levels. Guaranteed to keep you stuck to your Mac for months. Rated 98%

LEMMINGS & DATA (CD135) Special £14.99

A ten CD set of very high quality colour Images. Each CD contains a different subject. Catagories inclide: Props, Majestic Places, Scenes, Money & Business, Baltik Designs and more. Great for DTP work.

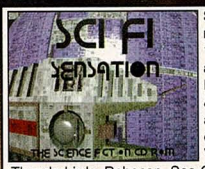
SUPER BUNDLE (CD106) £19.99

The Hubble Space Telescope archive contains the high quality images and superb quicktime movies from the Nasa archive includeing space shuttle missions 31 & 61. An Internet tutorial is also incuded.

HUBBLE SPACE TELESCOPE (CD137) £29.99

A huge collection of some of the most impressive 3D animations available. From rotating city scapes, to little green men, to In-flight animations, to crawling ants, bomber planes, and a number of morphs.

AWESOME ANIMATIONS (CD131) £14.99



SCI-FI Sensation is an exciting new CD-ROM containing over 1GIG of SCI-FI images, animations, 3D objects, Sound FX, Documents, Themetunes, Scripts & SCI-FI games. Subjects included are: Babylon5, Startrek (The original, TNG, Deep Space 9 and Voyager), Batman, Dr Who, Thunderbirds, Robocop, Sea Quest DSV, Bladerunner, Aliens, Terror hawks, 2001. Blake7, Battlestar Galactica, Tron, Total Recal, 2010, Space 1999 etc. SCI-FI Sensation also includes hundreds of miscellanous 3D space craft objects, Hundreds of misc. SCI-FI images, sound fx and more.

SCI-FI SENSATION DOUBLE CD (CD118) £19.99

The 1000 image files on this CD ROM will dazzle you. There are images of the earth, the stars, astronauts and spacecraft. Most of these images are from NASA. You will see the vantage point of deep space probes. Over 5000 text files will fill your mind with detailed accounts of space missions and comprehensive data on topics of astronomy. A collection of space-related shareware rounds out the Space & Astronomy CD.

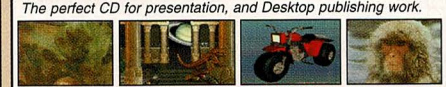
SPACE & ASTRONOMY (CD15) £19.99

This is the most comprehensive encyclopedia about the Space Shuttle ever produced. It contains over 3015 GIF images, most of which are full colour and all royalty free, so you can use them for what ever you wish to. The Space Shuttle encyclopedia also features over 3700 text files about every Space Shuttle mission and loads more fascinating data. Delve into the history and excitement of the Space Shuttle encyclopedia.

SPACE SHUTTLE ENCYCLOPEDIA (CD138) £19.99

Over 7,000 top quality colour images. Subjects include: cats, aviation, animals, people, hi-tech, space, cars, trains, textures, nature, sports, pinups, boats, flowers, plants, seasons, birds, technology, raytraced, cartoons, fantasy, art, reptiles and dozens more subjects.

The perfect CD for presentation, and Desktop publishing work.



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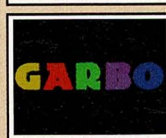

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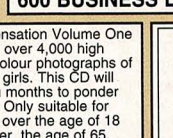

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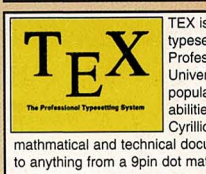

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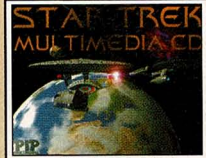

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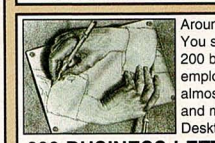

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Pick a card

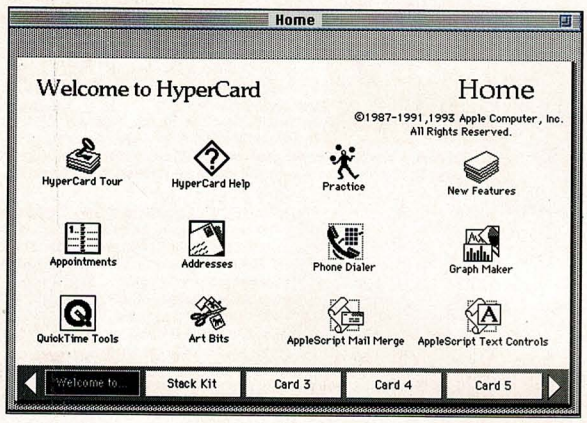
HyperCard receives official Apple support, but the closely-related _SuperCard_ has a large rebel following. Rod Lawton reviews the latest versions, head to head.

Á LA MODULE

HyperCard is a modular package. It has all sorts of plug-in modules, which enable it to do much more than the basic application permits – but these extensions are often complex to implement, clumsy and slow.

HyperCard has long been the standard entry level multimedia Mac application. But if _HyperCard_ has benefited from being Apple's chosen development tool, it's been shadowed all the way by _SuperCard_, an independent development on the same theme.

And 'development' is the right word. _SuperCard_ is beginning to look like the program that _HyperCard_ always should have been, but wasn't. If you compare the latest version of _HyperCard (2.3_ – just released) with the latest version of _SuperCard (2.0_ – a couple of months old), it looks bad for _HyperCard_, particularly if you compare the features each offers, such as graphics, animation and sound.



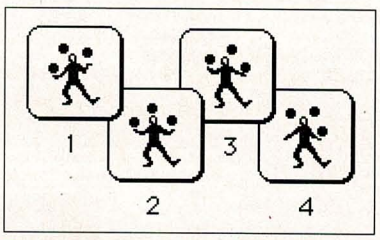
Has _HyperCard_ met its match in _SuperCard?_ _HyperCard's_ mono intro screen tells a sad story – not a greyscale in sight, never mind colour.

Graphics

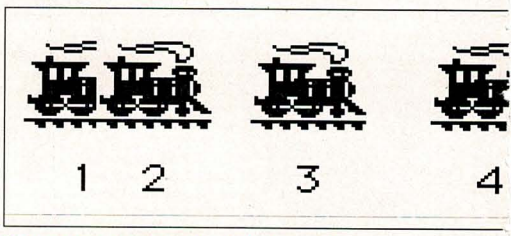
HyperCard, despite being in its umpteenth incarnation, and despite the fact that it's no longer possible to even buy a mono Mac, runs in mono. Not even 8-bit mono, but 2-bit mono. Version 2.3 comes with a Color Tools stack, which enables you to colorise stacks and modify bitmap PICTs with some elementary paint tools (in itself a major improvement over version 2.2), but it's slow and clumsy. You can import and place colour PICTs on cards, but that too is clumsy and tiresome. _SuperCard_ is in a completely different league. It offers 8-bit colour painting and drawing tools. Graphics occupy their own frames, and you can have a number of graphics on the same card, superimposed or otherwise. You can also click on a graphic to execute a script, much as you might click on a button or field. _SuperCard's_ graphics tools are not exactly cutting edge, but they make _HyperCard's_ look a complete joke. _SuperCard_ wins by a mile.

Animation

Although you can create animations in _HyperCard 2.3_, it's cumbersome, limited and involves makeshift scripting. You can display different icons in different locations in sequence, you can use a script to lasso and then drag a graphic around the card, and you can run through cards in sequence (too slow on all but the fastest machines). _SuperCard_ can do all this, and it can create PICS, STEPs and Filmstrips, all of which are much faster and smoother than _HyperCard's_ bodges. _SuperCard_ has a built-in capability to play and control QuickTime movies, whereas with _HyperCard 2.3_ you need to work via the QuickTime Tools stack.

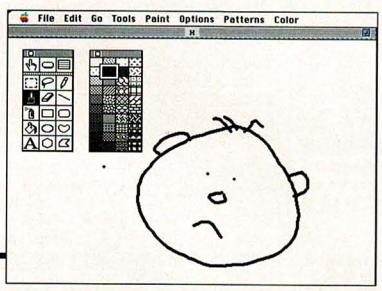


One way to create an animation in _HyperCard_. Create a button for each cel of the animation (cels 1-4 here), then write a script to show or hide these buttons in turn at the same location.



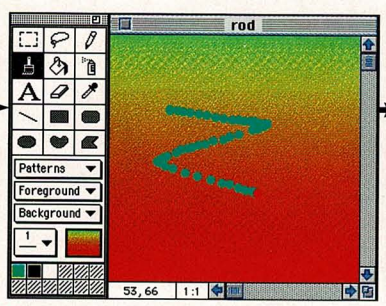
Another _HyperCard_ animation technique: write a script to lasso a graphic, then drag it across the screen. Bit fiddly, but perfectly possible.

HyperCard 2.3 has an ace up its sleeve, though – the _ADDMotion_ stack, which forms part of the package. This

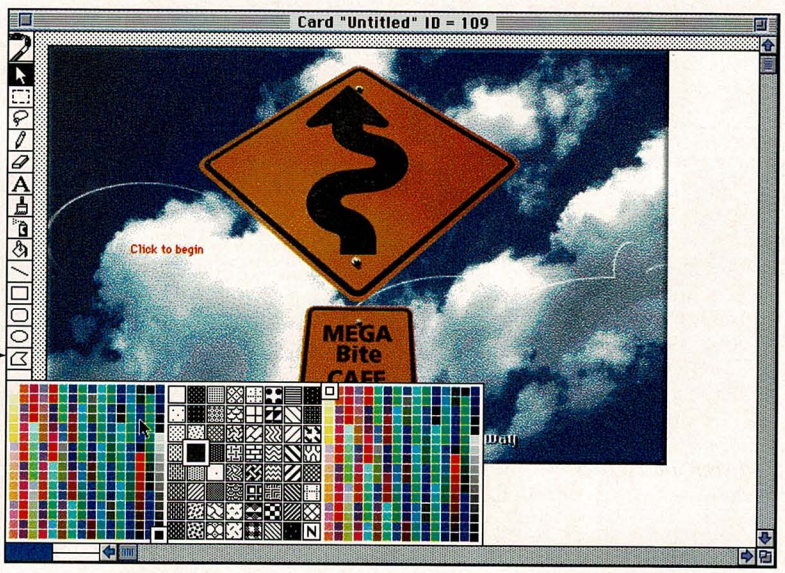


HyperCard's paint tools were the state of the art in 1983. But we're not in 1983 any more...

...but look, what's this? _HyperCard_ has had 'colorising' tools since version 2.2, while 2.3 adds colour painting tools to the program...



Those colour painting tools might be good, but they take 20 seconds to open and close, and make most other editing tools unavailable.



Despite _HyperCard's_ best efforts, _SuperCard's_ built-in (and always on tap) paint tools are quicker and slicker to use. One up for _SuperCard_.

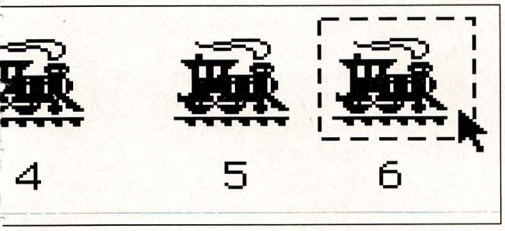
SuperCard's sound importing is good, but basic, whereas *HyperCard 2.3* now boasts some serious sound-handling abilities.

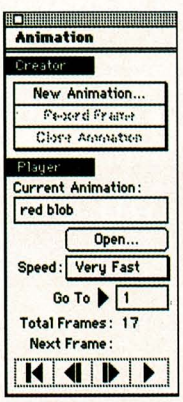
animation package wipes the floor with anything *SuperCard* can offer, and *ADDMotion* animations can be installed as part of *HyperCard* stacks, whereas most *SuperCard* animations must be stored as external files.

SuperCard has built-in animation facilities, while *HyperCard* has none, but judged as a package of related products, *HyperCard 2.3* offers more power – although at the expense of having to fiddle around installing resources into your stacks.

Sound

Both *HyperCard* and *SuperCard* enable you to import sound files and control their playback. Both programs also enable you to record and edit sounds, provided you have the hardware. *SuperCard's* recording capability is a little basic and fairly technical, but is always available, while in *HyperCard* you need the Audio Stack. This comes with most release versions of *HyperCard*, and is simple but great.





You can do all the above animation tricks in *SuperCard* too, but you don't need to because it has a formidable set of animation tools built in.

More than that, though, *HyperCard 2.3* now supports speech synthesis and multichannel sound. This serious sound capability would be all the more impressive if *HyperCard* didn't have such pitiful colour graphics capabilities, but we'll let that pass for now.

Chuck in the sound capabilities of *ADDMotion*, which is, after all, part of the *HyperCard 2.3* package, and *HyperCard* noses ahead in the sound stakes.

Text

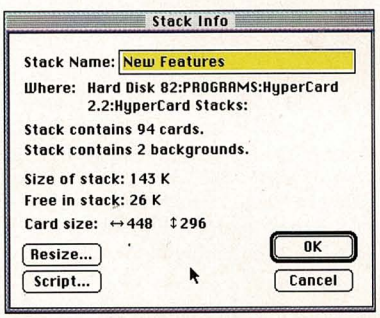
There's very little to separate the text-handling abilities of *HyperCard* and *SuperCard*. Both deal with field text in the same way, both offer a similar set of field styles, and both have a maximum character limit of 32,000 characters per field.

SuperCard does have one big advantage, though. It can generate draw graphics as well as paint graphics, which means that you can create pictures using proper outline fonts. This might not make much difference on screen, but the printed output is far better. However, *HyperCard* is a little quicker at manipulating text around in fields. This one's a dead heat.

Development

This is where the two programs are very different. In *HyperCard* you develop a stack as you use it. One minute you're looking up information in a database, the next you're rewriting the script of one of the buttons. Stack development and stack use go on at the same time. If *HyperCard* is all you've ever used, it probably hasn't occurred to you it might be otherwise.

In *SuperCard*, you develop the structure of your project (not stack) in *SuperEdit*, a separate application. In *SuperEdit*, none of the scripts work – it's purely a building environment.

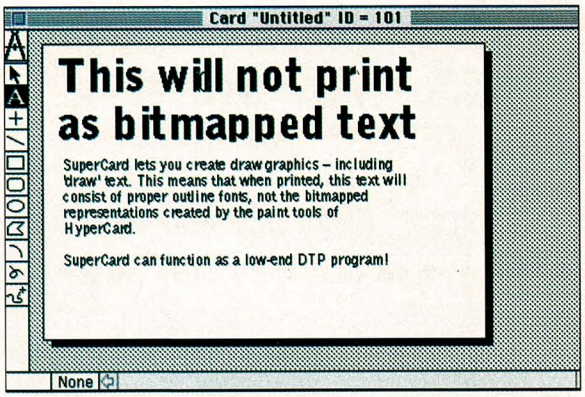


There's not much to know about a *HyperCard* stack, apart from its dimensions, its file size and how many cards and backgrounds there are. That's as complicated as it gets. If you want to design a product with lots of simultaneous windows, you're going to have to create a bunch of stacks and wire them together with scripts.

This takes a little getting used to after *HyperCard's* instant testing ability. To check something has worked in *SuperCard*, you have to 'run' the project, then wait while your hard drive shunts code and data to and fro, and takes you and your project into *SuperCard* to run it.

You can also edit your project in *SuperCard* using the Runtime Editor. This does most of the things *SuperEdit* does, enabling you to build and fix on-the-fly, as you would with *HyperCard*. But using the Runtime Editor to develop your projects is s-l-o-w, which is probably why *SuperEdit* is included.

However, *SuperCard* has other strengths. Its projects are not like *HyperCard* stacks. A project can contain a number of windows, each of which is like a *HyperCard* stack. Imagine how great it would be if you could group related *HyperCard* stacks together into a single, discreet file. That's how *SuperCard* is structured.


Card "Untitled" ID = 101
This will not print as bitmapped text
SuperCard lets you create draw graphics – including 'draw' text. This means that when printed, this text will consist of proper outline fonts, not the bitmapped representations created by the paint tools of HyperCard.
SuperCard can function as a low-end DTP program!
None

Because *SuperCard* has drawing tools as well as painting tools, you can create designs using draw-type text, which will print as an outline font, rather than as a bitmap.

For developing ambitious and complex multimedia applications, *SuperCard* is the clear winner. For developing seat-of-the-pants programming solutions, *HyperCard* is far quicker.

Programming

Both programs have a built-in programming language. *HyperCard's* is called HyperTalk; *SuperCard's* is SuperTalk. SuperTalk is described as a superset of HyperTalk, which means it has all the commands of HyperTalk, and then some.

HyperTalk and SuperTalk are basically identical, and *SuperCard* can convert *HyperCard* stacks to *SuperCard* – a neat trick, although you do have to dip in and poke about with the odd bit of code after some conversions.

If you know how to program using HyperTalk, SuperTalk is easy. It's almost identical, in fact, bar a few differences caused by *SuperCard's* different structures and additional features.

But *HyperCard* has the edge in that it now supports AppleScript, and in a big way. You can not only program *HyperCard 2.3* with AppleScript scripts, you can use it to develop, store and launch them – and it can control external AppleScript-compliant applications. AppleScript is completely integrated into *HyperCard 2.3* – yet it doesn't even make it into the *SuperCard* manual's index. *SuperCard's* minor programming superiority is wiped out by *HyperCard 2.3's* AppleScript support. If Apple get their way, AppleScript support and utilisation is going to become ever more significant in application design.

Standalones

Both programs can generate standalone versions of documents – files that contain their own run-time code. This means you can develop *HyperCard* stacks or *SuperCard* projects and distribute them freely as applications.

First blood goes to *SuperCard*, for producing standalones that are significantly more compact than their *HyperCard* equivalents. A modest standalone

S-L-O-W

Once installed in a *HyperCard* stack, the colour tools still take 20 seconds to open. Until you close them, there are many *HyperCard* editing functions you can't carry out. Closing the colour tools takes another 20 seconds. On a Classic? No – this was on a Centris 610.

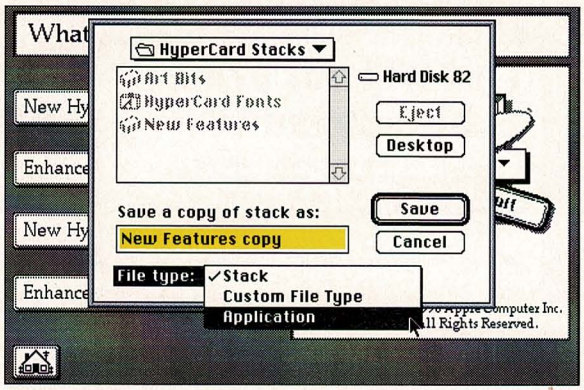
IT'S A PANE

A *SuperCard* project can contain many windows in different sizes as part of the same file. You often want to do this sort of thing in *HyperCard*, but it involves keeping lots of stacks in the right place and moving them around en bloc.

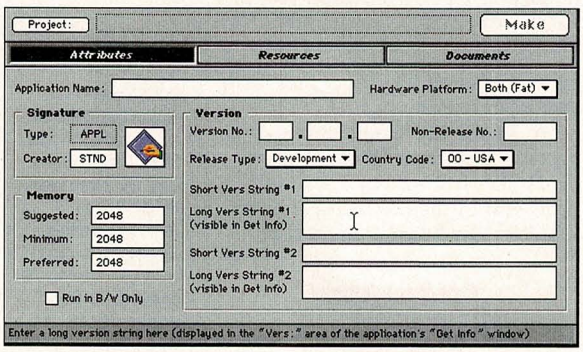
TALK TO ME!

With the right System Extensions installed, *HyperCard 2.3* can synthesise speech from on-screen text. You could easily produce a script to speak an introduction to each card opened, for example.

Continued on next page



Want to create a standalone *HyperCard* stack? It couldn't be easier.



Want to create a standalone *SuperCard* stack? It couldn't be more difficult.

project might come out at 600K whereas *HyperCard* standalone is likely to be at least 800K.

But, when you're used to the simplicity of generating standalone *HyperCard* stacks, producing a standalone application in *SuperCard* is by comparison a process of stupefying complexity. You need to set up a configuration file, check all the resources, and locate any additional external resources you may need. In *HyperCard*, you just select **Save As**, and save it out as an application. A big black mark to *SuperCard*.

Speed

The *SuperCard* manual warns *HyperCard* users that converted stacks may appear to run slower, but that's only because they've been optimised for *HyperCard*, not *SuperCard*. However, whichever way you look at it, *SuperCard* is slower. You won't notice the difference if you have an '040 Mac, true, but the more inefficient or ambitious your code, the more it's going to show. For a program that's often accused of sluggishness, *HyperCard* scores a surprise win in the speed trials.

Ease of use

When it comes to ease of use, there are two aspects: the user and the developer. In terms of ease of use for the user, both programs are identical. Both are based on navigating through cards, reading text fields, looking at graphics and clicking on buttons. It's all down to the skill of the designer rather than the power of the software.

Ease of use for the developer is a tougher one to call. *SuperCard* offers development tools that *HyperCard* programmers can only dream about, but in a clunky and rather slow development environment. In comparison with *SuperCard*, *HyperCard* is slick, efficient, and combines development and testing seamlessly – you wouldn't even consider them two separate things.

HyperCard 2.3 now offers 'button tasks' – ready-written scripts that perform common *HyperCard* tasks and can be attached to buttons. This makes it easier for you to write more complex stacks without any HyperTalk knowledge. *SuperCard* has them too – and you can attach them to buttons, fields and even graphics. As a multimedia development tool, *SuperCard* is in a different league. As a quick-fix programming tool, *HyperCard* makes it look like a lumbering dinosaur.

Ubiquitousness

HyperCard stacks are everywhere; *SuperCard* stacks are nowhere. That's a generalisation, but it's not far from the truth. If you want to disseminate multimedia documents in a format that the greatest number of Mac users can use, then you should distribute them as *HyperCard* stacks. Remember, you can convert these to *SuperCard* projects, but not vice versa.

In developer support, too, *HyperCard* is way ahead. There is a vast body of professional *HyperCard* knowledge out there, as well as a bewildering array of third-party stacks and XCMDs to add features and power to the basic *HyperCard* application. *SuperCard* has some very vocal adherents – and they've every right to be vocal. *HyperCard*, though, has the weight of history behind it, for better or worse.

Price

HyperCard is typically around £100; SuperCard weighs in at around £215. That difference is a fair measure of the features the two provide. In the value for money stakes, it's a dead heat. **MF**

COLOUR QUIBBLES

HyperCard 2.3's new painting tools only work on bitmaps. *SuperCard* supports PICT vector graphics too, and makes placing graphics in multiple layers far easier.

IN THE DOC

HyperCard 2.3's instructions state that for the latest information, you should read the right files first. They give the order of currency of the printed and on-line documentation. In all, there are six levels, going from Read Me files through New Features stacks, reference stacks, the manuals... oh, come on! That means that anything you read in the manual may have been updated in any one of five different places. Great fun.

PICK A CARD

Judged on features, *SuperCard* blows *HyperCard* out of the water. It does everything that *HyperCard* can do, but better. When it comes to creating, manipulating and importing graphics it's so vastly superior you can barely make a comparison. It also has built-in animation and sound tools that *HyperCard* lacks, plus a more user-friendly set of development tools.

That's likely to be your first reaction, but there's more to it than that. *HyperCard* is cheaper, leaner and meaner. It does less, but it does it faster, and generally with less fuss. The *HyperCard 2.3* bundle includes *ADDMotion*, an animation and sound package that completely overshadows *SuperCard's* worthy but limited tools. And don't forget that *HyperCard* is part of the Mac world, and is the closest thing you're going to find to a universal Mac development tool.

So which do you buy?

Well, if you want a quick, inexpensive tool for developing no-frills software for your own needs, then *HyperCard* is the answer. You can bolt on extra tools later if you need to.

But if you want all this and a nice-looking multimedia presentation tool too, get *SuperCard* instead. It's so much more effective in this role than *HyperCard*, that you can't help wondering what Apple and Claris have been playing at all these years.

HYPERCARD 2.3

Price: £95. **Out:** now.
Requires: Any Mac, 1,050K of RAM, 2,200K for colour (double for PowerMacs), System 6.05 or later (System 7 or later for AppleScript support and some features).
Contact: Apple on 0800 127753.

FEATURES 75%
For programming – excellent. For multimedia, via 'plug-in' stacks – fiddly.

EASE OF USE 85%
Fundamentally excellent, but the additional multimedia tools are slow to use, and never quite meld with the core program.

DOCUMENTATION 70%
The manuals are starting to look as if they've had one make-over too many.

VALUE FOR MONEY 95%
There's a lot of power and versatility included in this program.

MACFORMAT RATING 83%

SUPERCARD 2.0

Price: £215. **Out:** now.
Requires: Any Mac, 2Mb of RAM (mono projects), 4Mb of RAM (colour), System 6.05 or later.
Contact: Gomark on 0171 731 7930.

FEATURES 95%
Multimedia development – excellent. Programming – very good.

EASE OF USE 85%
Development and testing are difficult to do simultaneously. Nevertheless, a great environment for major projects.

DOCUMENTATION 95%
Polished, neat and clear.

VALUE FOR MONEY 80%
Compared to *HyperCard*, poor; compared to *Director*, very good.

MACFORMAT RATING 89%

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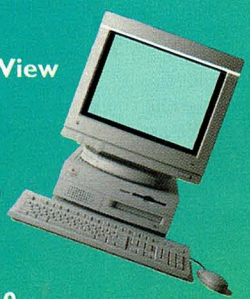

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KPT Vector Effects

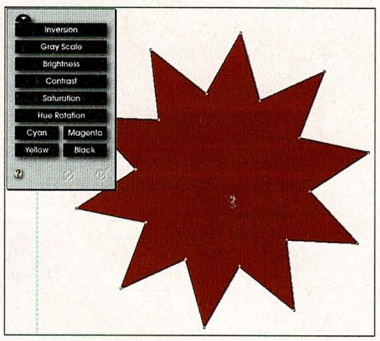
You feel limited by the features offered by *FreeHand* and *Illustrator*. You're looking for a package that offers loads of add-ons. Marcus Dyson's just found it.

There is no denying that *FreeHand* is an excellent package. But, for such a superb piece of software, there are quite a few things it can't do. None of its competition can do them either, of course, but with *FreeHand* being so good, you sometimes wish it could do those few extra special party tricks. Well, now it can.

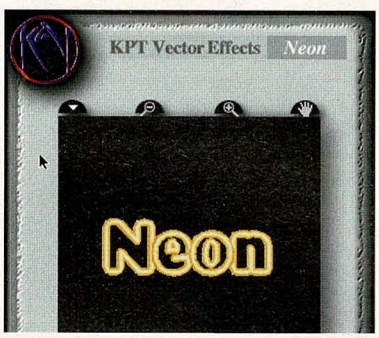
KPT Vector Effects adds a number of new features to both Macromedia's *FreeHand* and Adobe's *Illustrator*. You simply install the two-disk package into your XTras (or plug-ins) folder, and you're ready to go. We tested the effects using *FreeHand*, so if you're an *Illustrator* user you may find things a little different, but not much.

Vector Effects' effects appear in the XTras menu in the form of a submenu, naughtily named with a space at the start so it appears at the top. Each effect is a separate Xtra, although the effects can be combined by applying one after another. As you might expect, it's a mixed bag.

All of the XTras open up the now-familiar *KPT* interface, and, as usual, they are a joy both to look at and to use. Most of the menus appear over a black screen, although they can be adjusted in Preferences to appear over your drawing package like more conventional menus. Some of the effects add completely new abilities to *FreeHand* (or *Illustrator)*, while others simply make existing features easier to access. Or at least, that's the idea...



ColourTweak has the option to go live, so that you can see the results as you change the parameters. This sounds good, but it's not much easier to use than *FreeHand's* drag-and-drop colour.



The Neon effect is good enough, but it is another case of something that could easily be obtained by anyone with reasonable knowledge of *FreeHand*.

3D Transform

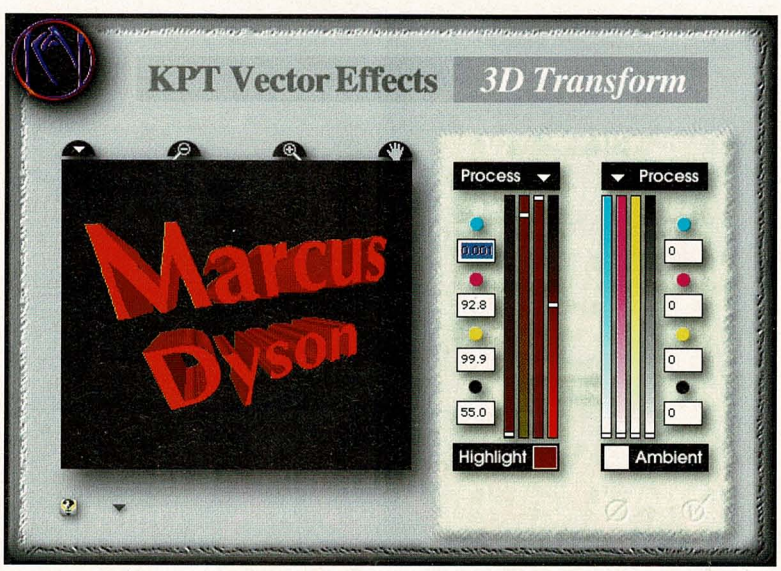
The first and perhaps most impressive module offered by *Vector Effects* is 3D Transform. This option can take any object and extrude it into a 3D shape, although text must be converted to paths before 3D Transform can be applied to it. The shape can then be rotated in space through all three axes.

This effect is similar to that provided by programs like *Dimensions* and *Add Depth*. However, unlike *Dimensions*, *Vector Effects* doesn't enable you to create a 3D object by rotating (or lathing) a 2D object. In this respect 3D Transform is limited. In practice, however, the most common use for *Dimensions* is 3D text creation, at which *Vector Effects* excels. And for more demanding 3D work you're always better off using a dedicated 3D package like Strata's excellent *Vision 3D*, rather than a program like *FreeHand*.

Vector Effects enables you to determine the position and colour of only one light, and to set the ambient light level. You can place a bevel on the object, but nothing more complex than a basic chamfer. For all its limitations, though, 3D Transform delivers superb results, and is extremely fast. Not only are the final images created in a fraction of the time that *Dimensions* takes, but a full effect preview is available, which shows a small scale version of the finished effect almost instantaneously. 3D Transform is almost enough reason to buy *Vector Effects* without the other modules, which is probably a good thing, considering some of their weaknesses.

ColourTweak

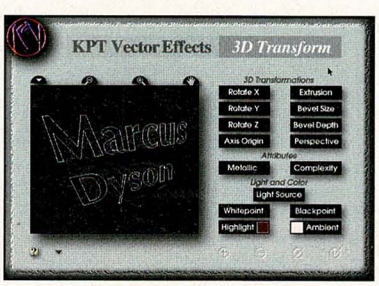
FreeHand 4 and *5* make the task of mixing and applying colours far easier than ever before, and although *KPT's* superb interface is always a pleasure to use, ColourTweak is just another,

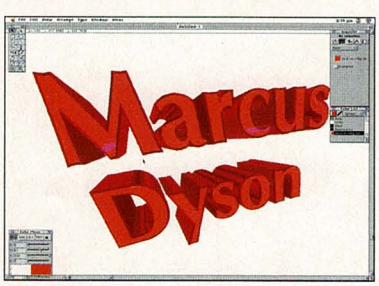


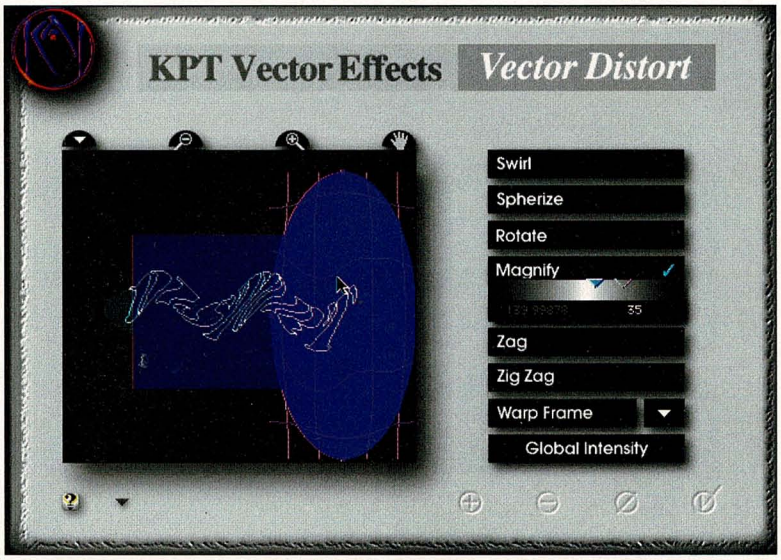
(Right) While the lighting effects are limited in 3D Transforms, control over the lighting colour is comprehensive and simple to use.

(Right above) 3D Transform makes simple extruded, rotated, and bevelled 3D objects simple and fast to create in *FreeHand*.

(Right below) The results of 3D Transform are as impressive as anything you could achieve using *Dimensions*.







Vector Distort enables you to apply as many 'influences' as you wish to an object. The results can be impressive, or just plain weird.

more attractive way of changing the colour of objects in an illustration, which is already perfectly simple to do in *FreeHand*.

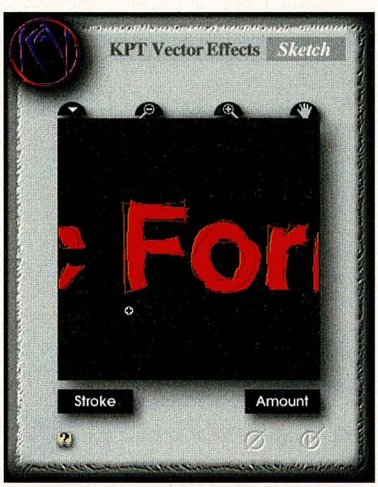
Emboss

One of the weakest of the effects, Emboss simply creates a lighter duplicate of your selected object and offsets it to one side, then creates a darker duplicate and offsets that to the other side. It's quick and simple to use, but the results are crude. If you're proficient in *FreeHand* you can easily obtain the same effect, with superior results.

Flare

Flare is another of *Vector Effects'* letdowns, although the idea is great. It would take you hours to meticulously create a lens flare effect in *FreeHand*, whereas Flare promises to do it all for you in an instant.

In practice, the interface is clear, and the effect looks initially promising, but the resulting flare is only visible inside the selected object. Since lens flaring can only ever look effective if it seamlessly spans at least two objects, the Flare effect misses the mark by quite a way. It's not totally useless, and with patience it could be effective,



but the resulting effect is no better than you could achieve with a good blend and 'paste inside'.

Inset Path

This feature graphically controls the Inset Path function that can be found in *FreeHand*, which sounds suspiciously like an over-complication of what is really a very a simple feature to use in its original form. On the other hand, Inset Paths are an excellent new feature in *FreeHand*, and this tool enables you to see instantly what effects you can obtain.

Neon

Neon offers you an automated way of doing an Inset Path and Blend combination. The result is wonderful if you're doing the titles for re-runs of *Happy Days*. Otherwise, once again, this just makes an already simple task even simpler.

Point Editor

Point Editor is a simple way of editing points on a path. While it's a good idea, it really only makes up for the one or two annoying shortcomings in *FreeHand's* Inspector palette, which, we hoped, Macromedia and Altsys were already planning to take care of in the next revision of *FreeHand*.

Point Editor is the only *Vector Effects* module to default to Live mode. This means that when you use it, you can see what is going on in the drawing you're working on. This would be fine if it were a modeless window, enabling

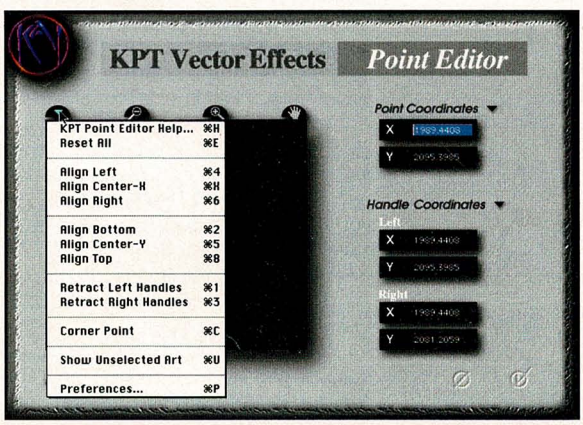
DISTORT

A before and after example of a relatively simple Vector Distort.

you to edit one object's points, then select a new object and edit that. Alas, that is not the case. Once you're happy with the changes you've made to the object, you must press the OK (tick) icon. Then, if you want to continue using Point Editor, you have to re-select it from the menu. Not exactly the most painless procedure.

Resize and Reposition

In case you hadn't guessed, the Resize and Reposition features offer you an easy way of resizing and repositioning artwork. This might be useful for *Illustrator* users, but if you're using *FreeHand* you can already do both with a simple point and click. And as easy as



The Point Editor is a great idea. After all, better control of point locations and curve handles is something *FreeHand* needs. But it would be so much better if it were a modeless window.

the *KPT* interface admittedly is, you really can't get any easier than *FreeHand's* simple controls. Not until thought control arrives, at least.

Shadowland

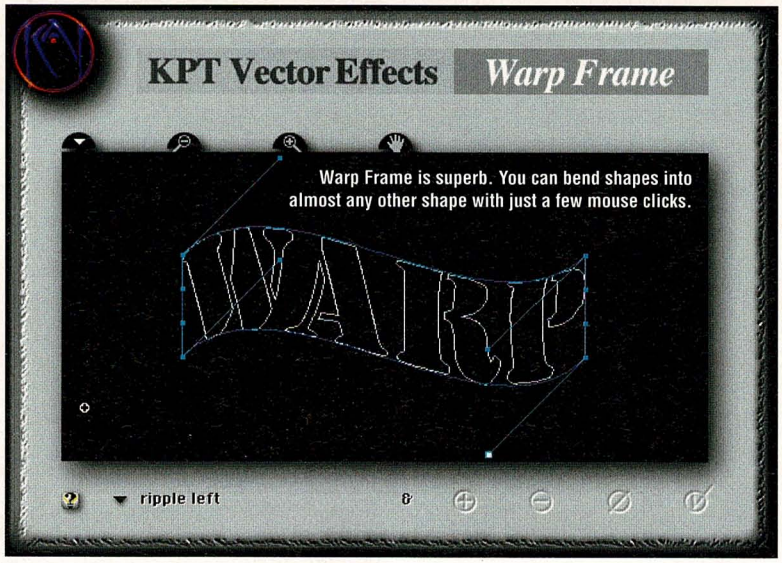
This module delivers zoom shadows, along with all the related trickery of scaling and rotating. While you can easily achieve most of what Shadowland does by using the Blend function in *FreeHand*, it does have one really appealing feature: it can deliver those gorgeous soft shadows that most people currently achieve by using a bitmap package like *Photoshop*.

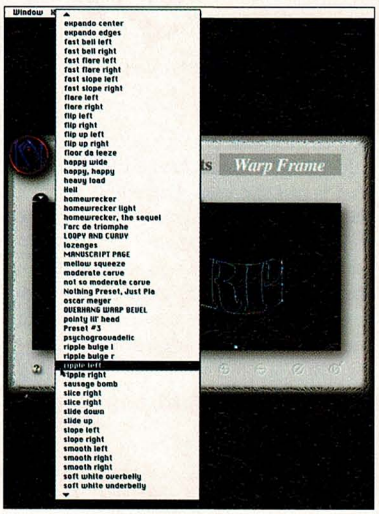
Continued on next page

Mac Format

Producing 'random' looking images, no matter which drawing package you're using, is always a difficult task. *Vector Effects* makes it a simple and pleasurable task for you.

WARP


KPT Vector Effects
Warp Frame
Warp Frame is superb. You can bend shapes into almost any other shape with just a few mouse clicks.
WARP
ripple left



As with many of the effects included in *Vector Effects*, Warp comes with a large number of effects already saved. These are accessible from the Presets menu.

Shatterbox

This feature is a contentious one. It sounds like a good idea, but it only works with *Illustrator*, which is disappointing to say the least. As the name suggests, this feature shatters your selected image, breaking it into pieces and scattering them around, as if the picture was printed on glass and then dropped. Until HSC get their act together and support *FreeHand* users, you'll have to get your artwork printed on glass and then drop it if you want to achieve this effect.

Vector Distort

Imagine you left your contact lenses dirty every night for months, then put in some eyedrops that dissolved them. Everything would soon start to look pretty weird, wouldn't it? And some of it might look quite cool, just before you went blind. Now you can save your eyesight by using this superb distortion tool.

With Vector Distortion you can spherise, twirl, magnify, zig, zag (one apparently is vertical, the other horizontal) or rotate your image. Or, if you're particularly bored, you can apply a combination of any of these effects. The resulting effects are incredible, to say the least. Any distortion can be obtained, and, as with most *Vector Effects* modules, you can save your favourites as presets.

Warp Frame

Vector Effects bows out with another must-buy feature. Warp Frame enables you to apply bezier distortion to any image, although the obvious candidate for this treatment is text. You can bend, curve and perspectivise text with just a few simple mouse clicks, and, as with everything else in *Vector Effects*, an interactive preview enables you to see what the final result will look like. *TypeStyler* from Broderbund already does this, but while the results it gives are effective, it doesn't work in the most user-friendly way. *Vector Effects*, on the other hand, is superb for styling type.

The Flare window promises much, but as the result shows (below), it fails to deliver.

Enormous files?

You would have thought that applying any or all of these complex effects would add an enormous number of extra points to your illustration, resulting in massive file sizes and images that are slow to print. *Vector Effects* is cleverer than that. Instead of adding points, *Vector Effects* (where possible) effects its manipulations by editing and managing curves, only adding extra points or objects where absolutely necessary. This makes the tasks that are performed by the program even more impressive.

In the final analysis, most of *Vector Effects'* modules are unnecessary, and, in some cases, almost useless. But a few of the modules it contains, most notably 3D Transform, Warp Frame, and Vector Distort, are so superb that they alone make this a must-buy product, if you're at all serious about graphics on your Macintosh and already possess a copy of either *Illustrator* or *FreeHand*.

And if you are an *Illustrator* user there's an added bonus to *Vector Effects* – it offers you some of the advantages that are already enjoyed by *FreeHand* users. HSC might do well to drop some of the less useful features altogether, and add even more functionality to the good ones. Better still, they could concentrate on making Shatterbox work with *FreeHand*. But then what would they have left themselves to do when it comes to *Vector Effects 2.0*? **MF**

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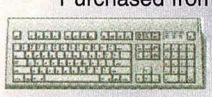

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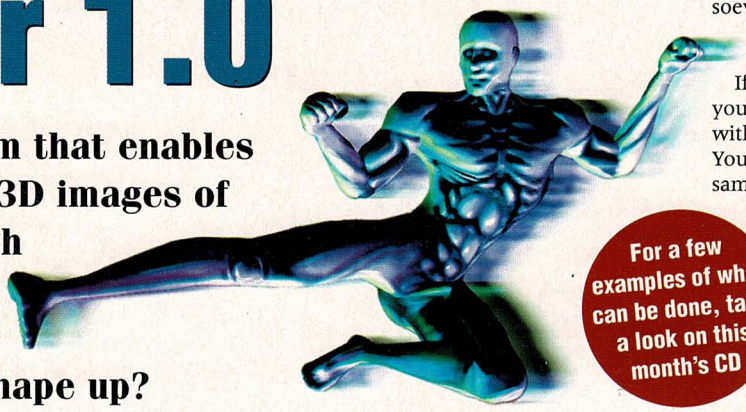


For a few examples of what can be done, take a look on this month's CD

Poser is a unique 'people-generating' program with an incredibly simple interface. One palette has options for manipulating body parts, camera angle and lighting, as well as moving and scaling the body you're making as a whole. Another palette enables finer tuning of all these using click and drag dials, and a third gives you access to libraries of predefined poses, body types, camera positions and light sources.

It works on the 'inverse kinetics' principle of 3D modelling, where objects are linked to those behind them, so that the whole body moves as naturally as possible. If you move your model's hand, it pivots at the wrist, and moves independently of the rest of the body. If you move the forearm, it pivots at the elbow, and the hand has to travel with it. However, it's easy to manipulate objects so that certain body parts are twisted unnaturally through 360 degrees. Even some of the predefined poses in the libraries palette suffer from this slight glitch.

When *Poser* saves in its own format, it includes all the details of the model, including lighting and camera angles. You can also export your images as flat PICT, DXF or RIB files. DXF is unsatisfactory as a 3D format, and native formats such as *RayDream*, *Strata* and *InfiniD* would have been more useful. Once exported, the models become single objects – you cannot manipulate them further in other programs.

Screen rendering is fast until you try anything complex, like put more than one model into the project or try to do a high-res render. And, like most 3D programs, it does tend to hog your Mac's processor.

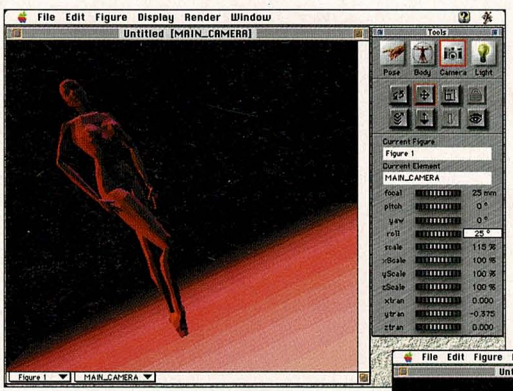
The renders aren't bad, but you need to be an expert in image retouching to get the kind of result you can use in a final composition. If you render a high-res image based on your initial figure (before you move anything) you get an excellent image, bar the rather angular head. Pose the body in what seems a natural way and you'll find anomalies in various areas of the render. Our sample images on the CD took much longer than expected because of this – what should have been a simple exercise in *Photoshop* turned out to be an image retouching nightmare. And forget any idea of rendering female models – they rendered ten times worse than the male figures and required an unfeasible amount of retouching work.

Worst of all when it comes to rendering are hands and feet. These seem to render with no shape quality whatsoever, and the only reasonable results come from a male figure with muscle texture and bump maps.

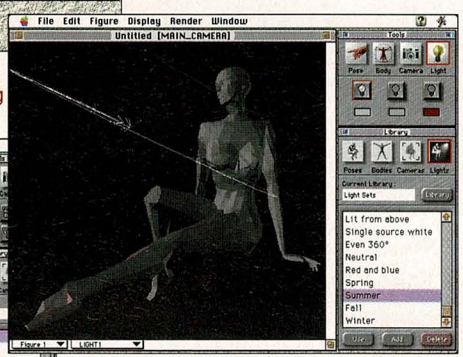
If you use Fractal Design's *Painter*, you can also make QuickTime movies with the figures you create in *Poser*. You need both programs open at the same time, and you need to be able to see *Painter's* Movie Window, so a 21-inch monitor and 128Mb of RAM are recommended.

The concept of this program is perfect, and it's well designed. The only problem is that as soon as you realise it doesn't always do what you expect, it becomes rather tedious. Let's hope future versions will have far more options for exporting to specific 3D modelling packages. Much improved texture mapping and inverse kinetics routines are also imperative. But when you consider that this costs £149, and the closest comparison is a 3D modeller program for around £700, *Poser* suddenly becomes a much more viable option if you're a 3D artist on a budget.

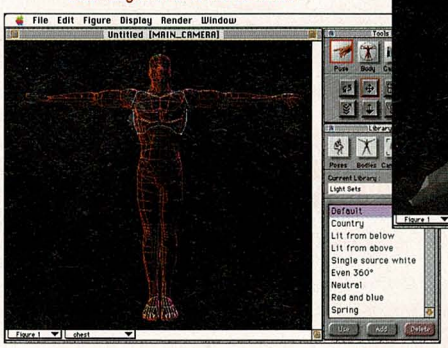
MARC WOODS



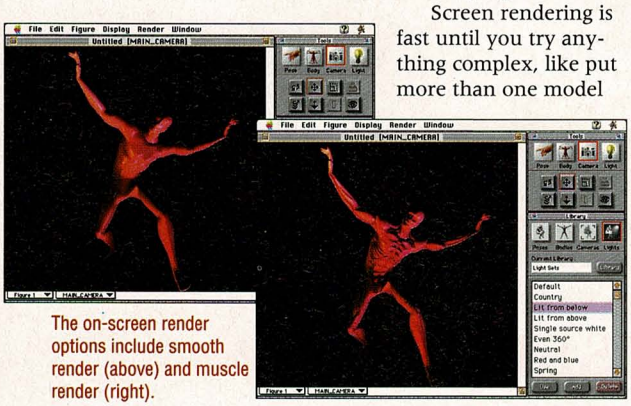
You can use palettes directly as a quick method of setting dials – here we're setting a 25-degree roll of the camera.



To put your model into correct perspective you can control the lighting, horizon and floor.



There are lots of ways of looking at your object while working with it – this is a lit wireframe.



The on-screen render options include smooth render (above) and muscle render (right).

PICT FILE

This is a general purpose picture format used by almost all graphics packages, including *ClarisWorks*. You use it to export still images from one program to another.

DXF & RIB

DXF is a common 3D format used for transferring images, in this case human figures, from one 3D package to another. RIB is the format you need to save 3D images in if you want to import them specifically into the 3D rendering program *RenderMan*.

FPU

The FPU (Floating Point Unit) is a maths co-processor chip. It speeds up software that requires a lot of mathematical calculations, such as spreadsheet or graphics programs. The lowest in the Mac range to include an FPU is the Quadra.

POSER 1.0

Price: £149. **Out:** now.
Requires: Mac with FPU (Quadra or better), 6Mb of free RAM, System 7.0 or later, 256-colour monitor (24-bit recommended), 6Mb of hard disk space.
Contact: Letraset on 0171 928 6351 or Computers Unlimited on 0181 200 8282.

FEATURES 75%
Many features, with some extremely undesirable effects.

EASE OF USE 85%
Initially incredibly easy to use, but the more you delve, the harder it gets.

DOCUMENTATION 75%
More than adequate. Well-structured, with good hints and tips.

VALUE FOR MONEY 65%
The final renders are rather unsatisfactory, so there's a great deal of work yet to be done. Buy it now and hope Fractal Design upgrade it soon.

MACFORMAT RATING 75%

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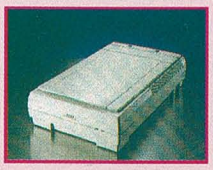

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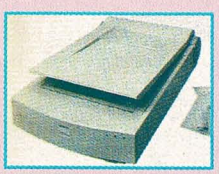

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SHAREWARE AND PD

Why go to the Internet, when the Internet can come to you with Derek Smith's definitive guide to the weird and wonderful software released this month.

Despite my attempts to avoid the seedier side of the Internet, once again I've come across some smut, which I feel it is my duty to inform you about. But on a much more interesting note, I also came across some great utilities. Much more my style. Stop sniggering at the back.

Strip-Mac! 3.0.3

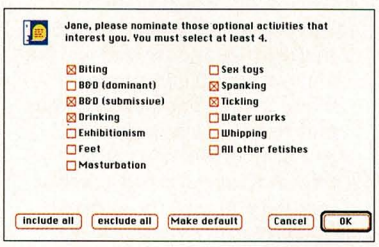
SEX GAME

Freeware

Woody Allen once said that his brain was his second favourite organ. Well playing with my Mac is my second favourite pastime. My favourite is of course crocheting, but for many people it might be sex. Just think of the potential appeal of a program that combines the two. Macs and sex, that is, not crocheting.

All the shareware featured here is on our covermounted CD-ROM

Strip-Mac is a card game designed to enliven a party of adults, assuming that they need enlivening. Don't get this confused with computer strip poker. Those are games where you play poker against a computer opponent to remove the clothes from a digitised picture of a woman (strange how those games always play a really bad game of poker). Apart from being desperately sad, I don't remember seeing any of those games advertised in this country, although I have this French Macintosh mag...



If you've always wanted sex with your Mac, then get hold of a copy of *Strip-Mac*, but don't forget the flavoured condoms.

Instead, this program is designed to referee a game of strip cards. You start off by entering the details of up to 12 willing, and presumably drunk, friends. There's a minimum of two players, so I was unable to fully test the program myself.

You enter what clothes each person is wearing, as well as what activities they enjoy, such as whipping, tickling or spanking. Unfortunately there are no options involving hamsters. You also select your sexual orientation from straight, gay or bisexual. The game is intelligent enough to take this into account when prescribing activities and forfeits. It's interesting to note that you can alter your sexuality at any point during the game. This is presumably for those who want to play it cautious until they see the others naked.

All this setting up takes a while, after which time the interest may have started to wane, but assuming you're still keen, you get to play the game itself. To draw a card you can click the mouse or press any key on the keyboard – useful for people whose hands are too sweaty to grip the mouse.

Gameplay is very simple, but I shan't bore you with those details. The interesting bit is that during the game you'll face punishments, rewards and much loss of clothing. You can specify how risqué you want the forfeits to be, so that they can suit any group from one that wants a bit of naughty fun, to those seeking an illegal orgy.

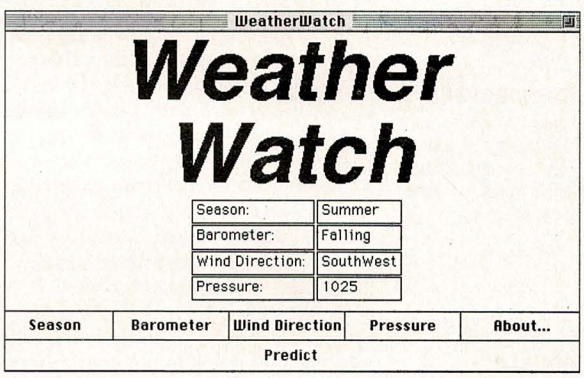
Opinion will differ greatly on the worth of such a program. It's very well put together and gives you the option to customise all aspects, including editing and adding your own punishments and rewards. Most of the office regarded this as a pathetic aid for people who can't get their leg over without the help of their computer. But hey, I'll bet you try this program out before you look at *WeatherWatch*.

WeatherWatch

WEATHER PREDICTION

Freeware

One of our readers, Mark Coates, has sent in this *HyperCard* stack that predicts the weather. A big claim. It does this by analysing four factors, the season, the wind direction, pressure and whether the barometer's rising or falling. How does it know all this? Does it calculate the pressure differentials by analysing the latent temperature of the hard disk? No, instead it uses your finger – you type the data in.



Don't bother with bits of seaweed or scrutinising the local cattle. If you want to know what the weather is going to do, take a look at our CD.

So the question is, does it work? Well I've been using it myself for the last week and it hasn't let me down

Continued on next page

STRIP-MAC!

All of the margin notes on the shareware pages this month are cards taken from the *Strip-Mac* game. This is purely to demonstrate the unsavoury nature of the game. Honest.

CONFUSED ABOUT SHAREWARE?

■ **Shareware** is a form of 'try before you buy' software selling and it's a great idea so long as you're honest. When you get some shareware, the documentation file accompanying it will tell you how much it costs – typically it's somewhere between US$5 and $40 – and where to send your money. If you like the software and decide to keep it, then you're morally obliged to cough up. Not only do you get the satisfaction of boasting to friends about how honest you are, but the author will often give you something in return for registering, like a printed manual, or updates when released. The most common problem is sending money abroad, but as many shareware authors now accept credit cards, it's getting easier.

■ **Freeware** means that you don't have to pay for it at all. There are many derivations such as postcardware, which means you have to send a pretty postcard to the author.

But freeware is not strictly the same as **Public Domain** (PD) because although you don't pay for freeware, the author keeps copyright and you have to follow his terms and conditions to use the program. This often means keeping all the files together and not using or selling them for profit.

HAND STAND

Do a hand-stand for 30 seconds. The other players can give you whatever help you might need.

ICE BABY

In preparation for a long journey north, you must prepare yourself for the cold. Strip completely and let player 1 run ice cubes all over your body for 30 seconds.

yet. Only the other day it told me to take my umbrella with me, and sure enough, it was so hot I needed the shade. Well done, Mark. Now write a program to predict the welcome I'm going to receive from the wife when I get home, based on alcohol on breath, time of night, excuse delivered and whether my luck is rising or falling.

Electronic Greetings

GREETINGS CARDS

Shareware $14

Greetings cards must be one of the biggest rip-offs around. I mean, a bit of

Electronic Greetings enables you to send a card to someone via e-mail. This is known as progress.

HAIRDRESSER

Player 1, you are a hairdresser. Use your fingers to comb all the visible hair of the client of your choice.

stiff A4 card bent in half with a picture of a tree on the front and they charge you a couple of quid – more, if you opt for the version with a badge saying 'You owe me'. Blimey, you can get a 148 page copy of MACFORMAT with a floppy disk for £3.99, although we do have adverts. Still, if it meant cheaper get well cards, I wouldn't mind having an advert for Silk Cut printed inside.

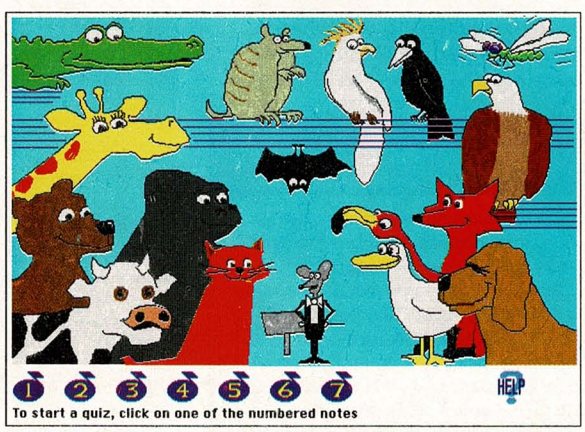
The idea of e-mail cards is very attractive. They're the cost of a short phone call and arrive quickly, so it won't matter if you forget your mum's birthday until four o'clock on the day.

You choose from a selection of 20 cards, all with rather dull covers that mainly just say 'Happy Birthday' or 'Congratulations'. A click of a button opens the card, and you can write any message you like inside. This card is then saved as a mini application, which you can just send down the phone line to your mum's modem.

She downloads it onto her Mac, double clicks it, and sees the lovely card that took so much effort. She then clicks a button to read the message inside, and no doubt her eyes go all dewy. Do you love anyone enough to send them an electronic greeting?

WIGGLE

Wiggle dance! Everybody turn to the person on your left and join yourself to them by standing behind them and pressing your body tightly against theirs. Now all wiggle about for 30 seconds.



Unfortunately, in *Echo* the animals don't bark and squawk the notes, they just beep very badly. It's rather like when I owned a Sinclair QL.

Echo

MUSIC

Shareware $15

Echo is a music tuition program aimed at children. You can tell it's aimed at children because it uses simple menus, a colourful screen, animals to play notes, and isn't terribly good. Yes, if ever you write a program that goes horribly wrong, just add bright graphics and label it for children.

The idea is simple. A mouse (of the furry variety) conducts a menagerie of animals, each one playing a different pitch note. You select a number between one and seven, and the mouse then conducts the animals to sing that number of notes. You must repeat the sequence by clicking on the same animals in the same order. Of course, instead of testing musical ability, it tests a child's memory.

Using the menus, you can stop the mouse from pointing at the animals, which then really tests a child's musical ear and teaches them pitch. Could you distinguish between a B flat and a C sharp? I learnt that I can't, so at least the program taught me that.

It all works fine, and I suppose a child might find it interesting, especially if they are keen to grow up and join Take That. There is an option to make the mouse conductor play you a song, such as *Hush Little Baby*, but you'll need much stronger ears than mine to withstand it.

3D-Screamers-v1.0b

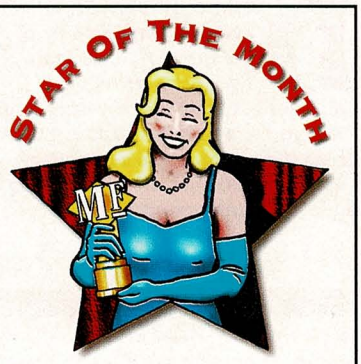
GAME

Freeware

'Oh great,' I thought, 'another shareware game. Will it be a puzzle game I can't do, a card game that's pointless, or an adventure game that requires half of your life to complete?' So I was quite gobsmacked when an ultra fast 3D game appeared on my screen. You whizz around at stunning speeds, shooting dastardly polygons from another world, in a game that looks just as impressive as *Spectre Supreme*.

After a couple of minutes, though, you'll begin to notice what's missing. There's no plot, no sound, no point. The Read Me file explains that this is not really a game, but a demonstration of a new programmers' tool from a company called Virtually Unlimited.

Using this tool, you can make your own *Doom*-a-like games. But don't get too excited yet. This isn't intended for mortals, but rather those great gods known as programmers. People who spend vast amounts of time learning an arcane language called C. I don't



Tea-time 1.1

TEA ACCESSORY

Freeware

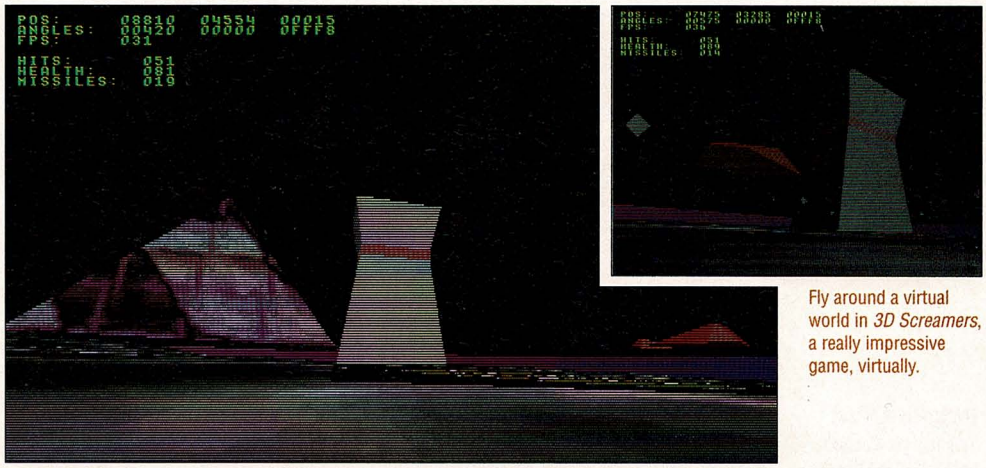
And I thought I was the only one! I'd be working away on my Mac, testing *Dark Forces*, then at a suitable time (when I'd been killed yet again), I'd make a cup of tea and leave it brewing. Two hours later, when coming up for breath again, I'd discover a cup of cold, dark brown liquid, which I'd have to throw away. I suppose I could put it in the fridge and try iced tea, but I've never found the courage.

Well, it turns out that this problem is so severe and pervasive, that a chap by the name of Thorsten Kramp has had to create a solution and save the lives of cups of tea everywhere.

The way it works is this: when you return from the kitchen, launch *Tea-time* and specify how long your cuppa should brew for. The default brew time is two minutes and 30 seconds, but you can alter it to any length you wish – particularly handy if a tea bag is near the end of its productive life and needs an extra ten minutes.

When the time is up, a message appears on screen, along with the chimes of Big Ben, reminding you to attend to your tea. This is without doubt the most important piece of software to hit my Mac this year. Unpalatable tea is now a thing of the past. It's amazing to think that I believed I was the only one who did that. Still, I used to think I was the only one who liked wearing women's underwear...

Tea-time is a wonderful program, dedicated to upholding the British way of life. I'll write a thank you letter to the author. Hmm... where's Bergisch Gladbach?



Fly around a virtual world in *3D Screamers*, a really impressive game, virtually.

Serenity

FINDER REPLACEMENT

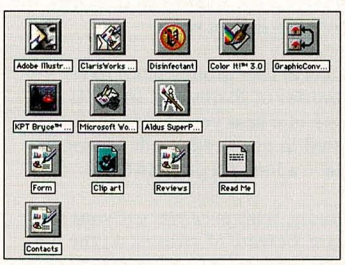
Shareware $10

Serenity replaces the usual Desktop with a simplified version, consisting of a single window with up to 20 user-defined buttons. Clicking a button opens a program or file.

Although *Serenity* is even simpler to use, Apple's own *At Ease* is not only designed to do exactly the same job, but comes free with Performas and System 7.5.

True, *Serenity* can limit others' access to your Mac. You can set a password which has to be entered to return to the usual Finder, shut down or restart. But it's not failsafe. Anyone who knows a bit about Macs can physically switch off the machine's power, then restart with **[shift]** held down to prevent all Extensions from loading, including *Serenity*.

Okay, so you could lock the Mac itself away or disguise it as a bookend. No use, so long as the keyboard is still accessible. Pressing the emergency key combination **[command] [option] [esc]** forces any program to quit, including this one. Okay, how about if you physically break the **[esc]** key? That should stop anyone gaining access to the Desktop, but someone really destructive could still create a file and save it with the same name as a file that already exists, which would delete and replace the original. Believe me, there are people that annoying around. So despite its elegant simplicity, *Serenity* can't fully protect your Mac and just isn't useful enough to choose over *At Ease*.



Serenity is a useful utility that might stop children ruining your Mac. Alternatively, you could just threaten them.

know who named that language, but they must have been pushed for time.

The good news is that we may soon see lots of real games released on the Internet created with this tool. It's just puzzling why the creators of this game engine only managed to produce a pathetic demo themselves. It must be the worst advert for a product since the editor decided to drive a Ford.

ScrapIt Pro 4.1

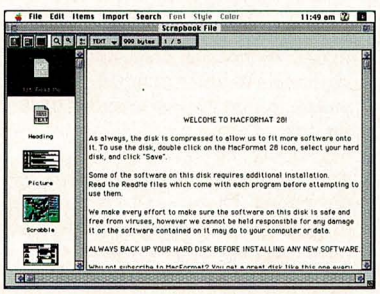
UTILITY

Shareware $15

Lots of commercial programs, such as *FileMaker*, have added the suffix 'pro' to their name, presumably to convey the status of a professional program, as opposed to an amateur program. I suppose if Claris did a sponsorship deal with some TV personalities, we would see *FileMaker ProAm*.

It does seem contradictory to have pro shareware, but here's another example, so let's see if it's worth the label. *ScrapIt Pro* enables you to store regularly used items, such as text, graphics, sounds or movies, which can then be copied and pasted at a later date into any application, wherever you desire. If this sounds rather like the Scrapbook which you find under the **Apple** menu, then that's because it is. Ah, but don't forget, this is pro.

In this case, pro means you have extra features such as a word count, a QuickTime player, and thumbnail lists for graphics. You can type text, or record sound, directly into the program, and save text and graphics directly to disk. It takes a lot to excite me, and this certainly didn't hit the spot. Admittedly it has more features than Apple's Scrapbook, but I'm not sure who needs them enough to pay for it. Perhaps I'm just not professional enough to appreciate it.


File Edit Items Import Search Font Style Color
Scrapbook File
WELCOME TO MACFORMAT 28!
As always, the disk is compressed to allow us to fit more software onto it. To use the disk, double click on the MacFormat 28 icon, select your hard disk, and click "Save".
Some of the software on this disk requires additional installation. Read the ReadMe files which come with each program before attempting to use them.
We make every effort to make sure the software on this disk is safe and free from viruses, however we cannot be held responsible for any damage it or the software contained on it may do to your computer or data.
ALWAYS BACK UP YOUR HARD DISK BEFORE INSTALLING ANY NEW SOFTWARE

ScrapIt Pro gives you more copying and pasting tools than you ever thought necessary.

Icons For Your Wife 1 & 2

ICONS

Shareware $5

If you want people to download your software from the Internet, give it a good name. Dermot Cottuli did this by naming his icon collection *Icons For Your Wife*. The reason for the name is still not entirely clear, but the second collection does indeed contain pictures of his wife leaning against folders.

In a world of drab Desktops and serious icons, these two collections are indispensable, and I just hope that Dermot's wife doesn't object to gracing the Desktops of complete strangers.

PasswordMaker

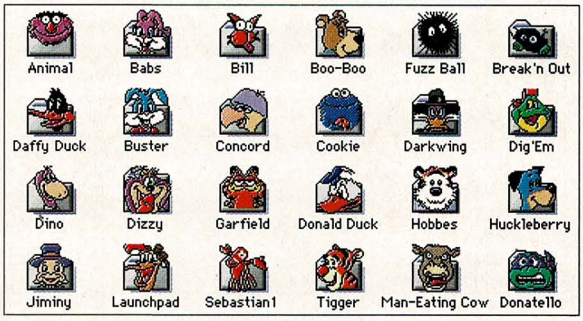
TEXT GENERATION

Freeware

Passwords are a good thing. I discovered this after someone logged on to my e-mail account and sent our managing director a rude message, which, of course, carried my name and e-mail address. It's very difficult to prove that you're not yourself. In fact, it's about as difficult as the physical feat suggested to the MD.

So you think up a password based on something you won't forget too easily. Unfortunately, there are hackers who make a career out of guessing obvious and common passwords such as 'flagellation' (don't bother, I've changed it now). You need to create a

Continued on next page



The perfect icons for your wife. Although my wife said she'd much rather see naked men.

INSIDE OUT

Player 1, remove an item of your clothing and put it back on inside out.

IMPRESSIVE?

You may direct the player of your choice to do an impression of a famous person (they get to choose who). If the majority of the other players aren't impressed, then he or she must remove a piece of clothing.

LEFT OVERS

Player 1, for the next minute you must wear the most recently discarded item of clothing, regardless of whose it is.

LADY SHAVE
Using your hands, examine the girls of your choice and decide which one has the smoothest legs.

PasswordMaker is ideal for amnesiacs and those terminally short of imagination.

PEEPING TOM
You may peek down the front of the player of your choice's underwear!

password that isn't based on a hobby or your dog's birthday, but a randomly chosen word is easy to forget.

PasswordMaker is an ingenious alternative. Type in your obvious password, then your name. The program uses a formula to generate a seemingly random and obscure password for you. Of course, you are just as likely to forget it as a random password you made up yourself. But the whole point of it is that if you enter the same information into *PasswordMaker* again, it'll give you the same password. This is because it uses a set calculation, rather than anything random. Perfect for administrators who have to dish out passwords endlessly, or for people like me who have obvious hobbies.

Over!

DOG COURSE CONSTRUCTION

Freeware

FLATTERY
All the other players are to flatter you outrageously for the next minute.

I've seen it all now. *Over!* is a construction kit for designing obstacle courses for dogs. It's all there, ramps, jumps, fences, bear traps. Okay, so I fibbed a little on the last one, but this does contain most of the features that a person would probably need. I can't really speak from a position of authority, having never needed to do this. For me, a dog obstacle course is the back lane near my house, which dog owners use as a pet's toilet.

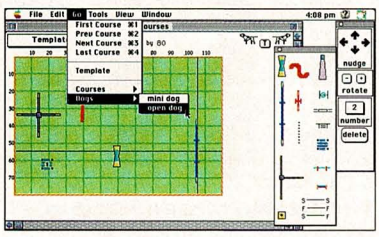
Like any good Mac program, it's easy to use, although not quite easy enough for dogs to design their own courses. From a floating palette, you drag the desired obstacle onto the field, then select an angle for it. You can plan a route for the canines to traverse, and finally print the whole thing out. This is what shareware is all about. Filling niche markets with wonderfully bizarre software.

Spacestation Pheta

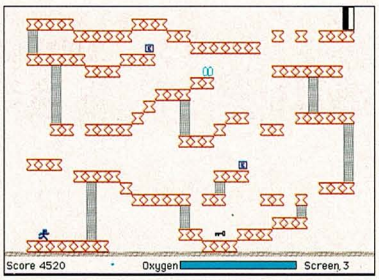
GAME

Shareware $9.95

This platform game has been around for years, but deserves a mention because of its simple addictiveness. You control a little man who runs around the screen, jumping from platform to



Over! has plenty of features to design a dog's obstacle course, but what on earth is an open dog? One that's just been run over?



Spacestation Pheta's graphics are basic, but you can create your own puzzles with its level editor.

platform, navigating ladders, pits, transport tubes and other obstacles.

The task is to simply collect the one or more keys and make it to the exit before your oxygen runs out. If you are not a fan of frantic arcade games, then don't worry. The oxygen problem is not a time limit, but is based on the amount you move, so if you stand still and think about your next move, you're okay. Movement is also in precise increments, so there's no wondering about whether you're close enough to the edge of a platform to make the leap.

Instead, this plays much more like a strategy game, where you have to solve the tortuous puzzle of how to make it to the exit. There are power ups and bonuses scattered around the many levels, but even these can be used ingeniously. Instead of just collecting them, you can jump on top of them to gain access to otherwise inaccessible platforms. It's a very cleverly constructed game that has you scratching your head determined to work the puzzles out. As such it's a great game and would appeal to the older Mac user. I'll give the editor a copy when I make his cocoa later.

Marathon Magazine

MAGAZINE

Freeware

You may have thought that *Marathon* was just this game where you killed some aliens. I know I did. However, it turns out that *Marathon* has sparked a religion where people pay homage to the rocket launcher and make supplications to that strange alien which looks as if it got its head stuck in a washing machine for a whole cycle.

The reason for the continuing interest is almost certainly down to the extras that are available for the game. It was cleverly designed by Bungie to make it easy for people to create new levels, monsters, and sounds.

There are now so many *Marathon* levels on the Internet that anyone owning the game and a modem could just spend the rest of their life running around ridiculous mazes and playing with nasty aliens.

Keeping up with all of this news is a job in itself, so to ease your journey, a group of *Marathon* addicts have produced a magazine dedicated to their favourite subject. Each issue comes with some of the best new levels and extras, saving you from hunting your way through the dross.

This particular issue focuses on the new *Dark Forces* and *Doom 2*, asking whether they will replace *Marathon*. Well, as you would expect from devoted acolytes, nothing will replace their favourite game. Perhaps the devotion comes from the fact that *Marathon* was never sullied by being released for the PC. Goodness knows how this lot will react when *Marathon 2* is released. **MF**

Along with the *Marathon* magazine you get extra levels and artwork such as this.

SHOW OFF
If you can guess the colour of player 1's underwear then they must show it to you.

WHERE TO FIND THEM

We often get calls from readers who want to know how to get hold of some of the shareware reviewed in these pages. Well, here are some of the methods:

1. Buy the CD-ROM edition of MACFORMAT: all the shareware we review in each issue is on there in a separate folder. There's also loads of other shareware on the CD-ROM every month, sorted into separate categories for you.

2. Write to a shareware dealer; there are several who advertise in the back of MACFORMAT. The dealer should have the program you're after, especially if he subscribes to our CD-ROM edition!

3. Use the Internet, if you have access. One of the best sources around is Imperial College at **src.doc.ic.ac.uk**. Use ftp to connect (login: anonymous; password: your e-mail address) and cd to computing/systems/mac. Personally, I use the umich directory, but sumex is fine as well.

4. Local user groups often have libraries of shareware, so see if you have one near you. There are some listed in our Reader Ads section (have a look on page 141).

Finally, wherever you get your shareware, beware of viruses. At the moment, *Disinfectant 3.6* (on MACFORMAT 26's cover disk and CD-ROM) is the best and cheapest way of staying safe.

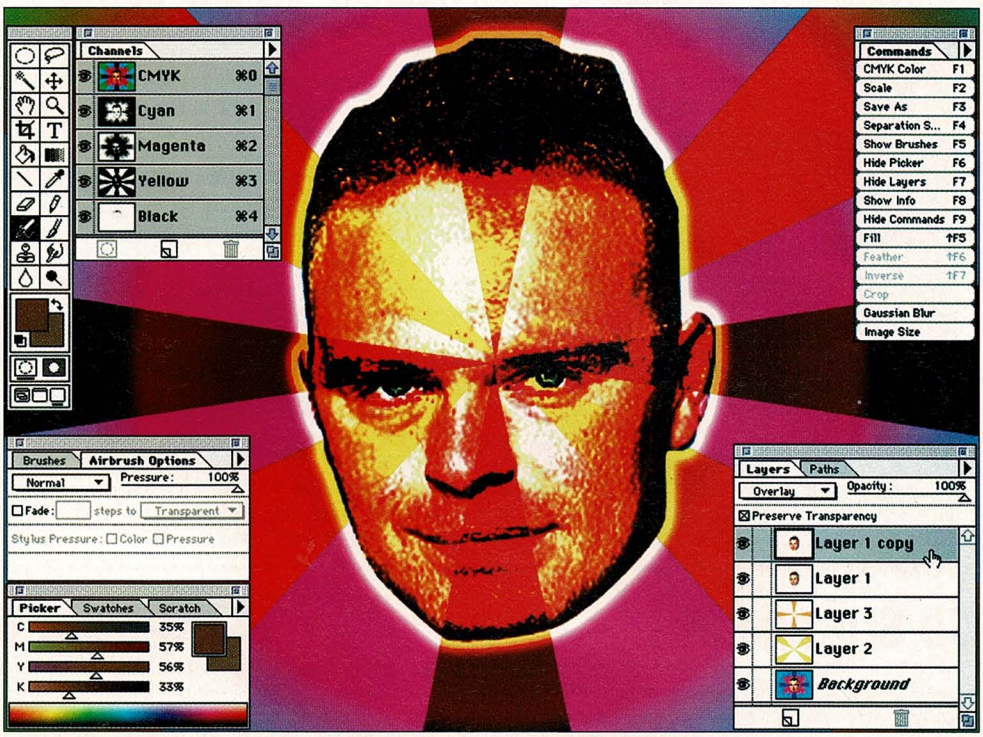
Photoshop rules, OK?

Last month's soapbox really rattled *Photoshop* fan Marcus Dyson's cage, when reader Douglas Havin suggested that Adobe are selling us short...

Reader Douglas Havin's opinions about *Photoshop* and *Deluxe Paint* amazed me so much that I was moved to put pen to paper, despite the fact that previously I have only ever done so for MACFORMAT in response to commissions from the editor.

I have to point out one or two things about Douglas's letter, not in the interests of nit-picking, but rather to illustrate that his tone was more one of emotional rhetoric than of objective opinion.

First, he claims to have had an Amiga for 10 years. True, he may recently have seen *Amiga Format* celebrating ten years of the Amiga, but the anniversary to which they refer is its press unveiling at CES in 1985; the machine did not go on sale until 1986. He also states that he bought a Mac five years ago when they became affordable. There was no noticeable decrease in the Mac's price/performance ratio in 1990; in fact, they stayed as unaffordable as ever. The main box of a IIfx 4/160 was a very reasonable £6,970; the Mac Plus, with its micro-mono screen (ideal for image processing), was still just a bargain £1,150. The great Mac price decrease did not occur until 1992, when the IIsi was released as the first (almost) affordable colour Mac.



Reader Marcus Dyson takes *Photoshop* very seriously. *Photoshop* doesn't necessarily return the feeling, at least not in the hands of our new Deputy Art Editor, who used to work with Marcus on *Amiga Format*...

Extra Half Brite?

Before taking up my role as a regular writer for MACFORMAT, I worked for five years on *Amiga Format*, climbing the ladder from Art Assistant to Managing Editor of *Amiga Format* and its sister magazine, *Amiga Shopper*. During this time I took part in a panel which offered suggestions about what should be implemented by Electronic Arts in *Deluxe Paint 5*. Throughout all this I used *Photoshop* as my chosen image manipulation package in preference to *Deluxe Paint*.

Despite the fact that the Amiga could display 4,096 colours, *Deluxe Paint* could (until version 4) only handle 64 colours – and this was using Extra Half Brite mode, where one half of the palette was controlled by the other half. It did this best at a screen resolution of 320 by 256 – higher resolutions flickered in such a way as to quickly cause headaches.

Amigas had only 512K of chip (or graphics) RAM, which increased to a final limit of 2Mb. This placed a limit on the size of image that could be effectively handled by *Deluxe Paint* – a limit that, when spare screens were used, was usually restricting if you were working on an image of more than the screen size.

In terms of *Deluxe Paint's* supposed ease of use, it was reasonably user-friendly, but to suggest that it is more so than *Photoshop* is simply preposterous. If *Photoshop* is more confusing to those familiar with *DPaint's* features, it is because its interface controls many times the number of functions. Saying that you could just choose a feature and paint with it in *Deluxe Paint*, and that you cannot with *Photoshop*, is patently untrue. Just as with *Photoshop*, if you just click and paint in *DPaint* you get the default settings of the tool. To obtain more sophistication requires you to alter the settings in both programs.

Perhaps the greatest sin that *Deluxe Paint* committed was that it was abysmally slow – a fact that lead to it being superseded as the premium Amiga paint package some years ago, despite Mr Havin's implication that it is still such.

The suggestion that Adobe are in some way conning us is ridiculous. Calling it internal company politics to do so is simply paranoiac. Adobe are responding to the needs and desires of a worldwide user base, and delivering a high-powered professional tool. If this fails to meet the requirements of users who expect the likes of *Deluxe Paint*, it is hardly surprising.

Additionally, *Deluxe Paint* costs around £80, but upgrades from one version to the next cost a mickey-taking £50. While *Photoshop* may be a trifle expensive at £799, it streets at a more palatable £399, and upgrades are a bargain £100.

Mr Havin says that, even after three years of using *Photoshop* and reading seven books on the subject, he is still 'not winning'. I fear this is a great clue to his complete misunderstanding of these two programs' relative merits. *Deluxe Paint* was a fine low resolution, low colour-depth painting program for a 16-bit home computer. *Photoshop* is a power-user professional tool. Mr Havin might be far happier with a copy of *Color It!* Or if he really wishes to see Electronic Arts' rendition of *Deluxe Paint* on the Mac, he should try and dig out an old copy of *Studio 8*. Either of these programs may better suit his requirements.

Marcus Dyson
Wakefield

Marcus Dyson is a frequent freelance contributor to MACFORMAT, but rarely gets this excited about the stuff we pay him to write.

IT'S NOT US!

The opinions on this page are those of the author, not necessarily those of MACFORMAT or Future Publishing Ltd. If you have something to say, write to 'Soapbox', MACFORMAT, 30 Monmouth Street, Bath, BA1 2BW. ASCII text on a disk would be nice, but it isn't essential. We reserve the right to sub-edit your letter, but won't alter the sense of any opinions.

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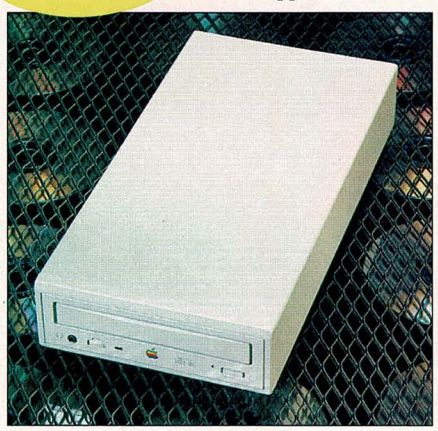

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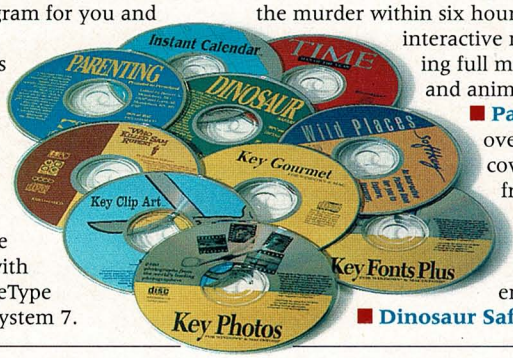

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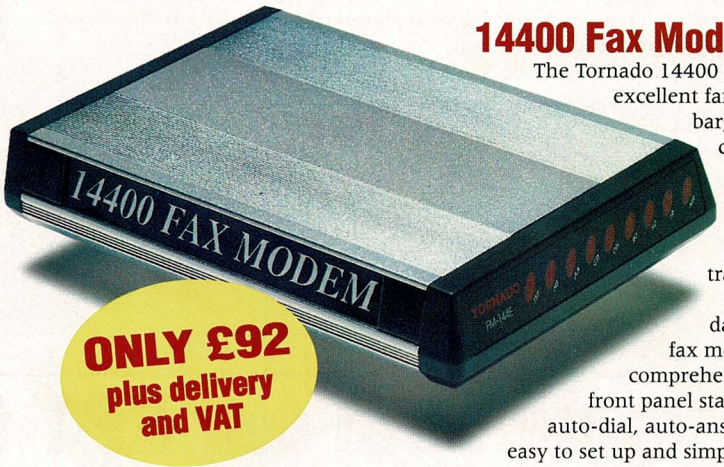
MACFORMAT Tornado Fax Modem Offer

Sad? Lonely? Bored? Your Mac could be your passport to popularity and social acceptability – if only you had a modem attached to it. You could communicate with Bulletin Boards, send and receive e-mail, join discussion groups, download all the latest shareware, even surf the Internet. With a fax-modem you can send faxes direct from your Mac and receive them straight on your Desktop.

The Tornado fax-modems from Electronic Frontier are sturdily built, with metal cases rather than the fragile plastic you often find. They are both super-efficient, super-fast, BABT approved modems and are fully Hayes (industry-standard) compatible. They have auto-dial and auto-answer, plus data compression built-in. They come complete with all the cables you need, plus *Delrina Fax Lite* software. And best of all, we can offer them at very affordable prices!



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The Tornado 14400 modem is an excellent fax-modem at a bargain price. V.32bis connection speeds, plus V.42bis compression and error correction ensure efficient data transfer whether you are using it as a data modem or as a fax modem. It features a comprehensive nine-LED front panel status display, with auto-dial, auto-answer built in. It is easy to set up and simple to operate.

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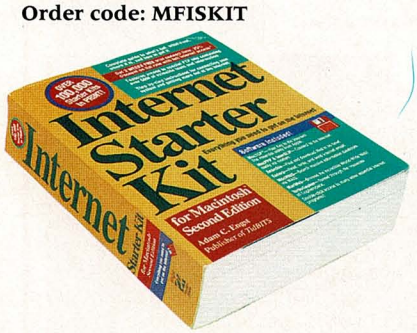
Internet Starter Kit

This is the second edition of this indispensable guide to everything you need to know about using the Net. The book comes complete with *The Internet Starter Kit* disk, which is packed with useful software. Inside you'll find practical guidance on how to get the most from the Net without going bankrupt, and where to look for all the latest information.

Internet Starter Kit
second edition
Price: £27.50
Order code: MFISKIT



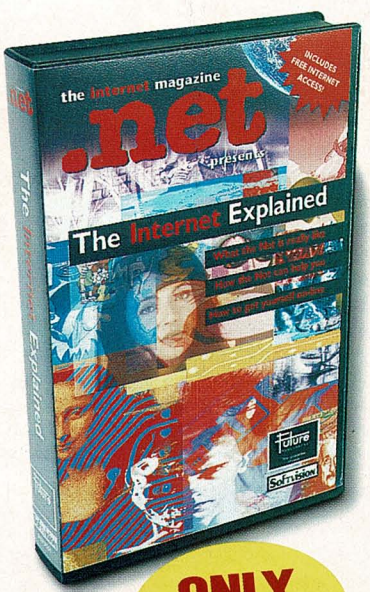
The Internet Explained Video

You've read about the Internet, now discover what the Net is really like with this *new* video. The experts from MACFORMAT's sister magazine *.net: the Internet Magazine* explain how to get your computer on to the Net and what's out there when you get on-line. Everything is explained clearly and easily, including:

- What the Internet is
- How it can be used
- What's out there, and how to get at it
- What hardware you need to get connected
- How to choose a service provider
- and much more

It's almost like having an expert by your side as you learn and explore – soon you'll be impressing your friends down the pub yourself. (Or boring them senseless...)

Produced in Association with Softvision
***The Internet Explained* video**
Price: £19.95
Order code: FLV9501



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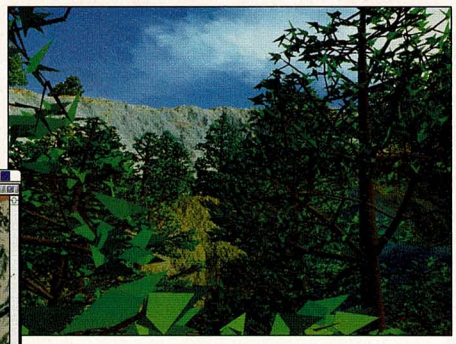
Exclusive Vistapro with FREE Distant Suns

Vistapro is a virtual landscaping package and MACFORMAT Classic to boot! We gave it the thumbs up in issue 15, where it scored a well-deserved 90%. It enables you to create your own three-dimensional landscapes, for use as backgrounds or simply for the sheer joy of it. *Vistapro* requires: a colour Mac running System 7, with at least 4Mb of free RAM.

Together with *Vistapro*, we're able to offer you a *free* copy of the multi-media title *Distant Suns*. An essential guide for the desktop astronomer, it displays over 255,000 stars and 2,000 galaxies and normally retails at £39.95.



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KPT Vector Effects

(MACFORMAT 29: 92%)

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KPT Vector Effects does for *FreeHand* and *Illustrator* what *Kai's Power Tools* did for *Photoshop* – it adds a brilliant new dimension to both of these programs, enabling you to easily create stunning 3D effects. Using the innovative interface you can rotate, swivel, bend and alter the look of any object, including text, to whatever you want. For a full review of *KPT Vector Effects*, turn straight to the full review on page 110, where it scored 92%.

KPT Vector Effects **Price: £116.32**
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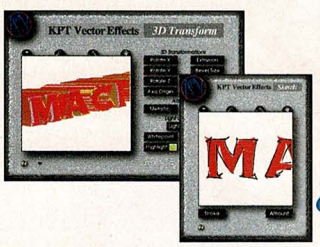

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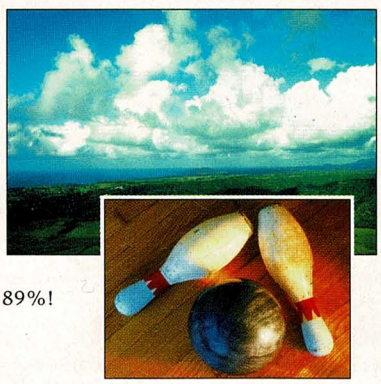

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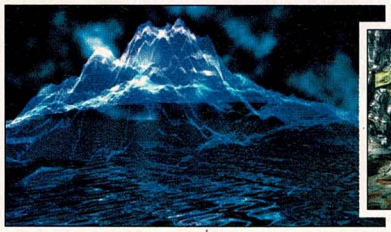

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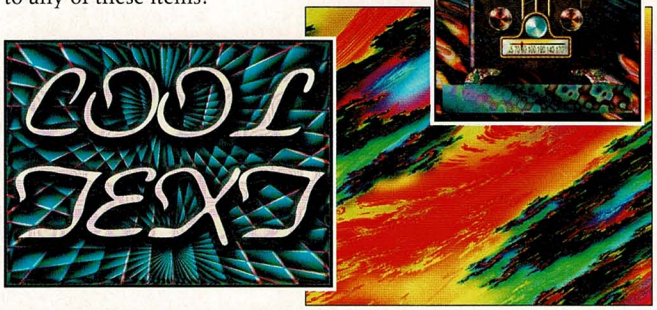

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ISSUE 17

October 1994

■ **On the disk:** *Crunch 2.0* and *Conflict Catcher* demo

■ **On the CD-ROM:** sorry, CD-ROM edition is no longer available

■ **Inside:** Discover how to future-proof your Mac with our top add-ons; reviews of *Sensory Overload, Wrath of the Gods* and *WordPerfect 3;* plus *Ritz Payroll*

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ISSUE 18

November 1994

■ **On the disks:** Internet software bundle; troubleshooting utilities

■ **On the CD-ROM:** *ClarisWorks 2.1; Rebel Assault* and *Sensory Overload* demos; 200Mb of utilities

■ **Inside:** How to beat those startup problems; plus *Norton Utilities 3* vs *MacTools 3;* and a review of *Theme Park*

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ISSUE 19

December 1994

■ **On the disk:** Hot action with *Wolfenstein 3D; Kid Pix*

■ **On the CD-ROM:** sorry, CD-ROM edition is no longer available

■ **Inside:** The lowdown on accelerators; the 20 top Mac games; SCSI trouble-shooting; *IntelliTalk;* OCR user guide plus Internet books reviewed

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ISSUE 20

January 1995

■ **On the disk:** Build worlds with *Fractal 1.2; Maniac 2.1.1; RAMDisk+ 3.23*

■ **On the CD-ROM:** sorry, CD-ROM edition is no longer available

■ **Inside:** Virtual reality special: *KPT Bryce* and *Star Trek Tech Manual; Word 6* vs *Nisus Writer;* how to write games for your Mac

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ISSUE 21

February 1995

■ **On the disks:** *VideoShop 2.0;* plus 3Mb of games and utilities; *Trojka; WordSmith*

■ **On the CD-ROM:** Demos of *Premiere 4.0, Marathon, Ghosts,* and *Star Trek: TNG, Technical Manual*

■ **Inside:** Video editing on Macs: how to do it; budget games; and what to buy if you run out of disk space

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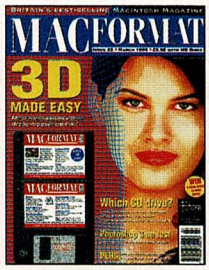

ISSUE 22

March 1995

■ **On the disks:** *Infini-D* demo; *MacConcept; Blobbo*

■ **On the CD-ROM:** 3D spectacular; *The Crystal Rainforest; VideoFusion*

■ **Inside:** How to create 3D images on your Mac; *Photoshop 3.0* reviewed; font problems solved; CD-ROM drives tested; and the most realistic flight sim ever

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ISSUE 23

April 1995

■ **On the disk:** *Oh-no! More Lemmings; StuffIt Lite 3.5*

■ **On the CD-ROM:** Comics collection; *PAWS; Sources of Faith; Marathon*

■ **Inside:** Comics on the Mac – interviews, reviews and how-to's; *FreeHand* vs *Illustrator;* colour printers; reviews of *XRes* and the best Mac game ever – *Marathon*

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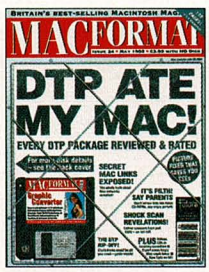

ISSUE 24

May 1995

■ **On the disk:** *Graphic Converter; MacCheckers!*

■ **On the CD-ROM:** Demos of five top DTP programs, including *QuarkXPress* and *PageMaker,* plus *Photoshop 3.0* and *ClarisWorks 3.0*

■ **Inside:** Every Mac DTP package reviewed and rated; Colour scanners; networks explained; *PhotoFix* reviewed

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HD Disk MFHD24

ISSUE 25

June 1995

■ **On the disk:** *Knot 1; MacSnails; Glypha 3*

■ **On the CD-ROM:** Get started with MIDI; plus Demos of *Alone in the Dark; Wing Commander; Loony Labyrinth, A-10 Attack.*

■ **Inside:** All you need to know about PowerMacs, fax-modems tested; plus some 'Cosmic' CD-ROMs

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ISSUE 26

July 1995

■ **On the disk:** Animation programs, *Disinfectant 3.6*

■ **On the CD-ROM:** Demos of *ProMotion, Amazing Animation, Elastic Reality, Morph* and *Circus,* plus *3D Dinosaur Adventure.*

■ **Inside:** Animation on the Mac; 15- and 17-inch monitors reviewed; comms made easy with *TeleFinder*

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ISSUE 27

August 1995

■ **On the disk:** *Anagrams, Xearth* and *BattleTanks*

■ **On the CD-ROM:** over 50 *Photoshop* filters, over 100 *Quark* XTensions, Internet utilities, *QuickDraw GX 1.1.2,* software for portables.

■ **Inside:** The complete guide to portable Macs; Internet basics series; plus portable printers reviewed.

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HD Disk MFHD27

ISSUE 28

September 1995

■ **On the disk:** *Catch The Buzz, Lobster, DragThing.*

■ **On the CD-ROM:** *Color It!, Dark Forces, Circle Elements* and *WorldWrite* demos, plus over 75 high-res clip photos.

■ **Inside:** Image editing; what those Extensions and Control Panels *do;* graphics tablets, PaperPort scanner and *Dark Forces* reviewed.

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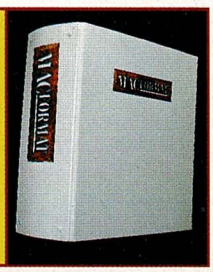

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Always be absolutely clear about what is included in the price – postage and packing? Any necessary cables, etc? VAT? By law, an advert must say *explicitly* if VAT is not included; if it doesn't, VAT *is* included. But this could be in the small print – so make sure you read it all! If you're buying in person, check that everything is there and that it all works properly before you leave the shop. If you're buying by mail, ring the supplier first to confirm the price and availability, and ask what your options will be if there should be any problem. Find out when you can realistically expect delivery. Always keep all the receipts and make records of all correspondence, whether it's by mail or by phone.

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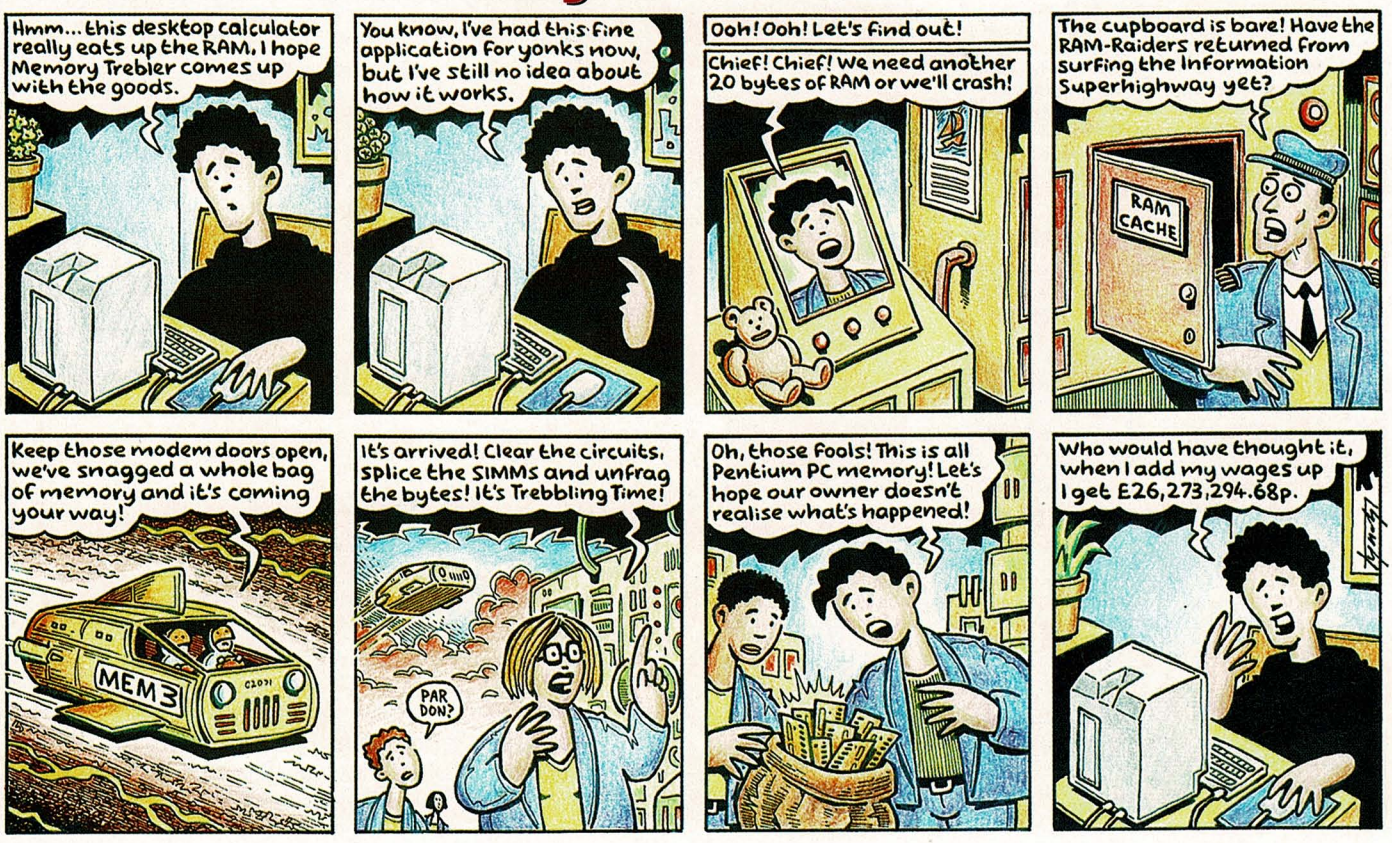
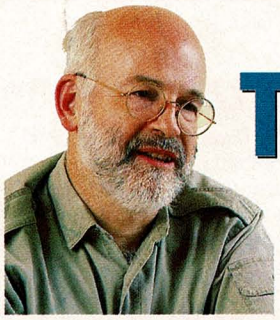
If the problem is still not resolved, you may need to take some sort of legal action to enforce your rights. This need not cost you a lot of money. You should seek advice from a solicitor (ask about the free advice scheme) or from one of the following organisations (check in your local telephone directory):

- Citizen's Advice Bureau;
- Trading Standards Office (listed under your local council);
- Office of Fair Trading; or
- County Court (ask someone there about the 'small claims procedure').

The Classic System Crew

By Bob Lynch


Hmm... this desktop calculator really eats up the RAM. I hope Memory Trebler comes up with the goods.
You know, I've had this fine application for yonks now, but I've still no idea about how it works.
Ooh! Ooh! Let's find out!
Chief! Chief! We need another 20 bytes of RAM or we'll crash!
The cupboard is bare! Have the RAM-Raiders returned from surfing the Information Superhighway yet?
RAM CACHE
Keep those modem doors open, we've snagged a whole bag of memory and it's coming your way!
MEM3
It's arrived! Clear the circuits, splice the SIMMS and unfrag the bytes! It's Trebbling Time!
PAR DON?
Oh, those fools! This is all Pentium PC memory! Let's hope our owner doesn't realise what's happened!
Who would have thought it, when I add my wages up I get £26,273,294.68p.



Terry Pratchett's Discworld

At last, a CD-ROM adventure based on the Discworld books. Is it funny? Is it playable? Is it, deep breath, both? Dave Golder takes *Discworld* for a spin...

Religion, science fiction and comedy – all command fanatical cult followings. A combination of any two of those elements creates a cult phenomenon. A combination of all three? Well, if Terry Pratchett, author of the incredibly popular *Discworld* books, decided to do an L Ron Hubbard and base a whole religion on his books (and the Flat Earth Society would doubtless be up for it), he could quite possibly end up as the new Messiah. Or bigger than the Beatles, at least.

Try *Discworld* out for yourself – find the demo on our CD-ROM this month

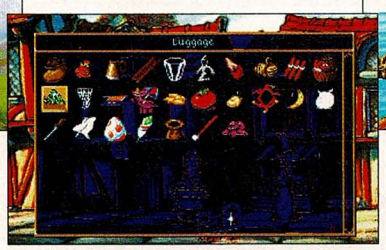
But, for now, he's happy with cult phenomenon status. Psygnosis are probably happy too, since the *Discworld* licence alone should guarantee healthy sales of this CD-ROM graphic adventure. Pratchett commands the kind of fans who would probably buy a CD-ROM drive, or indeed a Mac, just to play the game. But this is no quickie cash-in; this is what is known in the trade as a 'class product'. It's also known as 'a long time coming' or 'much delayed'.

Boasting digitised speech provided by actors including Jon (Doctor Who) Pertwee, Eric (not Spielberg's Doctor Who) Idle, Tony (Baldrick) Robinson and Kate (I do a good Fergie) Robbins, *Discworld* is a massive game, with complex animation sequences and hundreds of beautifully crafted locations.

Discworld, for the three people that have been stuck in a Milton Keynes car park lift for the last decade, is a flat disc-shaped planet which is carried through space on the backs of four giant elephants, who in turn are perched on the shell of a giant tortoise. On top of the disc live wizards, gnomes, elves, trolls and just about every other kind of being that has appeared in a role-playing game. But, thanks to Pratchett, none of them ever quite live up (or down) to their stereotypes.

Death has been faithfully reproduced from the books for the game. He really enjoys his job.

The moral of the tale: never trust a dragon. Which is handy, considering that dragons don't exist.



A nice, full inventory. Wonderful, except when it means you have to try everything with everything else, one after another, if you can't solve a puzzle.

The game is divided into Acts, each concerning a particular quest. The hero is the reluctant Wizard, Rincewind, fresh out of the Unseen University and accompanied by his trusty Luggage – a sentient trunk with hundreds of legs, psychotic tendencies and (luckily for the inventory) infinite space inside. His task is to rid *Discworld* of its dragon infestation.

Discworld would like to be *Monkey Island 2* with knobs and go-faster stripes, and, to a large extent, it succeeds. There's no denying the fact that it looks lush, and is often genuinely funny. The characters from the novels have translated well to the CD-ROM medium – Death, Rincewind, the Luggage and the Librarian all come impressively to life. And you certainly can't complain about the size of the game – it's massive, and takes even the most hardened adventure fanatic a good few days to complete.

What's large and pink and has 100 eyes? Dunno, but there's one behind you...

But the game has its failings too, suffering from a lack of interactivity in

Continued on next page

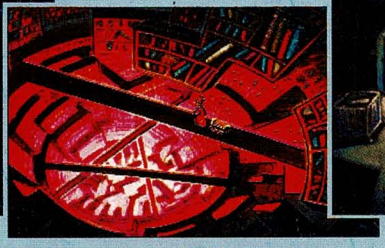
HE WRITES BOOKS TOO...

Terry Pratchett (born 1948) published his first book, a children's novel called *The Carpet People*, in 1971. The first *Discworld* novel, *The Colour of Magic*, came in 1983, and was followed by *The Light Fantastic* (1986), *Equal Rites* (1987), *Mort* (1987), *Sourcery* (1988), *Wyrd Sisters* (1988), *Pyramids* (1989), *Guards! Guards!* (1989), *Eric* (1990), *Moving Pictures* (1990), *Reaper Man* (1991), *Witches Abroad* (1991), *Small Gods* (1992), *Lords and Ladies* (1992), *Men At Arms* (1993), *Soul Music* (1994), and *Interesting Times* (1995).

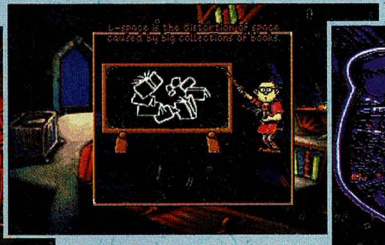
A 'NOVEL' WAY OF TIME TRAVELLING

One of the most inventive and yet irritating (depending on your clever-dick-puzzle tolerance rating) aspects of *Discworld* is L-Space – another time zone. The density of books in the library makes time fold in on itself, and one of the book shelves has become a time portal into L-Space. This means that you have to solve some of the puzzles by doing things in one time zone that alter the outcome of events in the other time zone, resulting in loads of temporal to-ing and fro-ing. It also means you have to search all the locations twice.

Rincewind exits L-Space through the library portal, while the Librarian dreams about bananas.



You'll be pounding the [esc] key to get past recurring scenes like this after your ten millionth journey through L-Space.



A David Attenborough soundalike explains L-Space theory in a scene that's strongly reminiscent of *The Hitchhiker's Guide.*

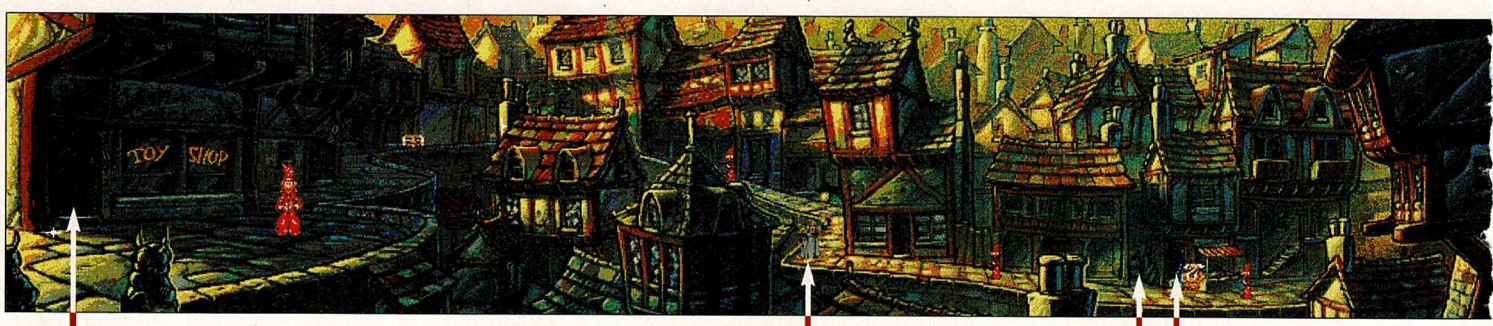
All the scenes in L-Space take place at night, but it's never quite clear if it's the same night.

particular. Minutes can go by where you just sit back, enjoy the scenery, and watch the characters ramble on. When you *do* get to interact with the characters, the conversation system is limited – the icon system is more useful for eliciting comedy responses than for extracting information.

There are times when *Discworld* is more like an animated movie than a game, except that the CD accessing time ruins any sense of flow and timing – the scrolling is slow and sound effects often don't match the action. The result is laboured, nothing like a real animated film. A shame, but true.

The puzzles are a mixed bag as well. They attempt to achieve a *Monkey*

THE PEOPLE ON YOUR STREET... These people and places could be useful on your wanderings.



The Toy Shop is run by a suspicious old gent who seems to be ex-Gestapo. He might seem barmy, but visit him a few times. He changes his stock regularly.

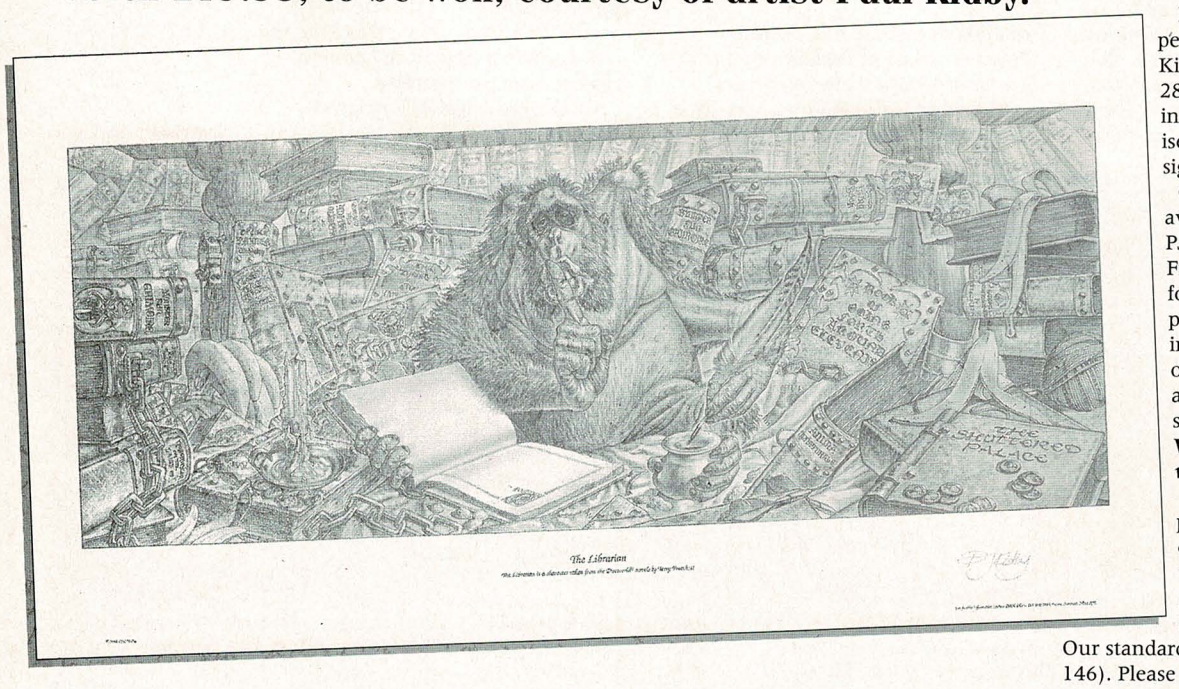
The mad monk raves incessantly – and he's not even in a tent in the middle of a field taking drugs. He has a habit you might want to pick up, though.

The plumbing in Discworld's main city, Ankh-Morpork, leaves a lot to be desired... inside toilets, for a start. Still, there's some interesting graffiti to read.

The fishmonger knows more fish jokes than Steve Martin does nose jokes in *Roxanne*. And watch out for the eels – they're electric.

Win a Discworld print

Don't just visit Discworld, put a piece of it on the wall! We have ten exclusive lithographs of the Librarian, worth £19.95, to be won, courtesy of artist Paul Kidby.



If you're a fan of the *Discworld* series, a collector of fantasy art or just really keen on monkeys and books, you'll want to own one of these incredible posters.

Painstakingly detailed in pencil by fantasy artist Paul Kidby, *The Librarian* is 717 x 280mm in size. It's the first in a series of prints authorised by Terry Pratchett and signed by the artist.

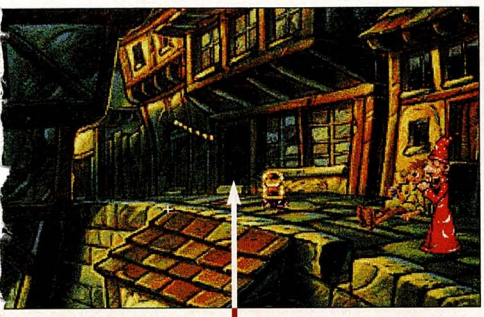
Copies of the print are available by mail from PJSM Prints, PO Box 1883, Frome, Somerset BA11 3YA for £19.95 each, including postage and secure packing in a tube. Or you can win one of ten, courtesy of the artist, by answering this simple question:

What was the first *Discworld* novel?

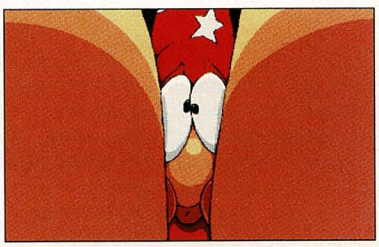
Send your answer on a postcard or sealed envelope by Friday 6th October to: *Discworld* compo, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW. Our standard rules apply (see page 146). Please state if you don't want your name added to a mailing list.

Island zaniness, and are sometimes devilishly inventive and fun, but often the logic behind them is so bizarre that you can't work out the links. You end up randomly trying out everything in your inventory until you find the right object; you're then presented with an animated clip that makes some kind of sense of what's going on. There are two time zones to complicate matters even further– an ingenious idea in theory, but it involves much tedious moving backwards and forwards in time. You also spend much of your time aimlessly wandering around Discworld itself. Because objects keep appearing in places you've already searched, you soon learn to search everywhere on a regular basis, which wouldn't be so bad if there were short cuts. But no, you have to cover the same ground and watch the same animated sequences time and time again. The game lacks pace.

Discworld is still very enjoyable. It offers many characters and locations, and not one of them is wasted in terms of comedy. Even if the quest goes off the boil, just walking around clicking randomly can provide entertainment – and often some surprising results. Pratchett fans should lap it up (although the humour does occasionally slip into sub-*Red Dwarf* mode), and hardened adventurers might enjoy the challenge too, but it doesn't justify buying a CD-ROM drive. After all these years, *Monkey Island* remains the top comedy adventure. **MF**



The barber doubles up as the city dentist, but, to be honest, his head's filled with thoughts of his long-lost love – the milkmaid.



Bet you never expected Dolly Parton to show up in this game.

DISCWORLD

Price: £49.99 **Out:** now
Requires: LCII or better (you might have problems on a PowerMac 5200 or 6200), 4.5Mb of free RAM, System 7.0 or later, 256-colour monitor, CD-ROM drive. Prefers *Sound Manager 3.0* or above.
Contact: Psygnosis on 0151 709 5755

GRAPHICS 89%
Space Ace meets *Asterix*. Impressive but occasional dodgy scrolling and animation.

SOUND 91%
Excellent use of digitised voices, atmospheric music and sound effects.

GAMEPLAY 78%
Massive, funny and often inventive in its challenges, but also complex, slow-moving and lacking interaction.

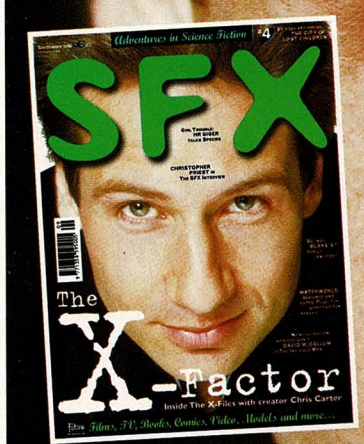
MACFORMAT RATING 81%

POWERMAC PROBLEMS

If you have a Performa 5200 or 6200 PowerMac, you may not be able to run *Discworld*. Reports made to the Terry Pratchett Usegroup alt.fan.pratchett, on the Internet, suggest that you have only a one in three chance of running the game on any PowerMacs, except the 6100/60.

SFX

Dave Golder is the deputy editor of *SFX*, 'The World's Greatest Science Fiction Magazine', which will possibly be the 9,232nd magazine to interview Terry Pratchett when his new book, *Masquerade*, comes out in the autumn… but it will be the best interview yet. You'd better believe it.



INSIDE THE SF TV SHOW OF THE '90S, WITH CREATOR CHRIS CARTER

PLUS: SPECIES, WATERWORLD, CHRISTOPHER PRIEST & MORE...

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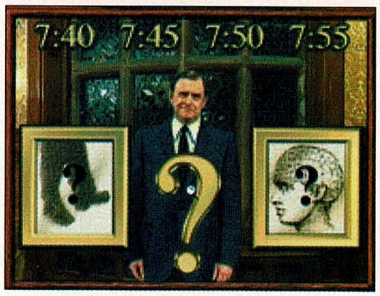
X-APPEAL

Future PUBLISHING

Films, TV, Books, Comics, Video, Models and more...

Foul Play

Don your raincoat and grab your magnifying glass – there's been a murder at the Manor! Join us as we investigate the Cluedo connection...



Time to grill the Senator. You can find a copy of the detective notes on the disc, which you can print out. Here you can record the details of Bluster's movements and his preferred weapons.

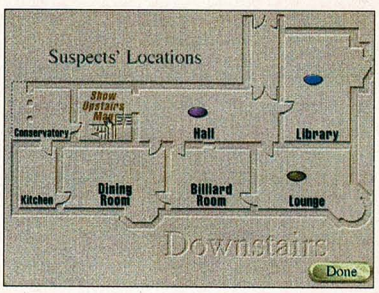
GET INTO GEAR

A faster 'native code' version of the game for PowerMac owners is included on the disc. The game requires more memory to run this version, and the memory partition set for the program is 7Mb. You must also turn off as many System Extensions as possible – they slow the game down.

For once this is a case where the butler certainly didn't do it. In fact, he's about the only person you can really trust when you pay a visit to Awkward Manor, the auspicious setting for *Foul Play*. You see, this multi-player release from The Armchair Travel Company is a classic boardgame that's received the Mac treatment – it's a Cluedo clone.

Up to six people can play, each taking charge of a guest. Those guests are all suitably stereotyped and Cluedo-like: Mrs Thatcham – a spinster who bears an uncanny resemblance to a certain ex Prime Minister; Miss Sang Lo – a temptress and no mistake; Mrs Drabble – the resident cleaner; Major Gallop – the mustard-coloured monocled gent; Dr Quandry – looks more like a vicar; and Senator Bluster – an all-smiling American chap. After being informed of the murder of the Duke (just before dinner, would you believe), it's your task to identify the villain and the weapon he/she used, then inform the police – although on the more difficult settings you must go into more exact details.

Great emphasis is placed on the game's Virtual Travel® environment. This has been composed of over 5,000 photographs of a 14-room mansion in England, all of which lends the game a convincing atmosphere. Now you can properly examine the contents of the conservatory, ballroom and study, all in 3D and in real time. *Foul Play* also boasts 65 animations, 1,000 suspect responses, over 2,000 sound bites, thousands of clues and over 4,000 responses. Blimey, sounds promising.



The map screen can be brought up at any time, showing you where all the other characters are, and who they're currently with.

It's elementary

After you've chosen your identity and learned of the poor Duke's demise, you are given your first clues to the mystery. Depending on which difficulty level you select (one to ten), you are give the time of the Duke's death (thanks to his broken watch), your whereabouts for the five minute time periods leading up to it and your preferred weapons.

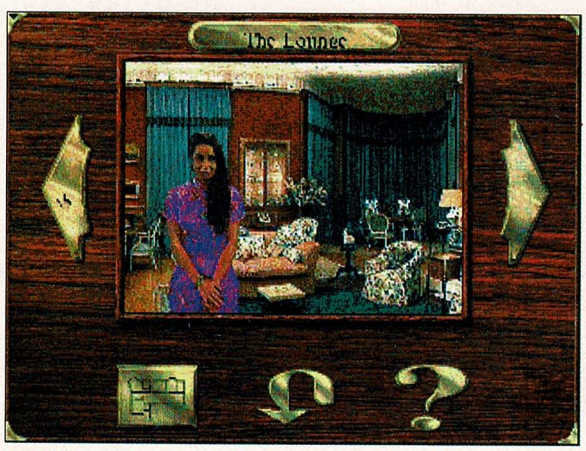
You must then move about the Manor, hunting for clues, trying to decide where the murder took place and, most importantly, questioning the other guests. On the easier settings, you merely ask them where they were at a specific time, and who with, and you can also be unsubtle and question them as to their preferred weapon. As you move onto the more challenging levels, you ask them if they've ever been into certain rooms, or find out what they've heard since the murder.

It must be said that there's certainly enough help for the beginner. At any point during your turn you can click on the ? icon to enter the Help screen. Accompanied by the butler's voice, you then proceed to learn every facet of the game – how to hunt for clues, how to call the police, interrogation methods, that sort of thing – so you can start playing straight away.

As a one player game, there's plenty to keep you amused, although, rather too frequently, you can guess the outcome after only a few probing questions, even on the harder settings. The developers have certainly tried to capture the flavour of the Cluedo boardgame, but get a few mates around for a game and they probably won't stay long. There's just too much hanging around for the other players in between goes, and the pay-off when you call the cops to arrest the villain turns out to be slightly limp too. Nonetheless, it's a reasonable conversion of the boardgame, and features some lovely little touches.

MARCUS HAWKINS

When you click on the **?** button, the Help screen is opened. This is where you can learn about the intricacies of the game at your leisure.



Now this is more like it – a bit of a chat with Miss Sang Lo in the lounge. The characters tend to walk off if you don't ask them a question straight away.

The motley crew gathered in the hall at the start of the game. You may have committed the murder yourself, so be careful who you accuse...

FOUL PLAY

Price: £39.99. **Out:** now.
Requires: LCIII or higher (slower machines will run the game, but you need to be able to run QuickTime 2.0), 5Mb free RAM, System 7.1 or later, 13-inch 256-colour monitor, CD-ROM drive. 8Mb of hard disk space is recommended.
Contact: The Armchair Travel Company on 0800 908909 or you can e-mail them at: foul-play@armchair-travel.com

GRAPHICS 64%
The characters don't speak in sync with the soundtrack (there are too many possible responses), but the gaming environment is atmospheric.

SOUND 70%
Some bonkers samples as you search the rooms for clues. The characters' voices are fairly clear.

GAMEPLAY 67%
An entertaining ramble for half an hour, but it's not something you'll want to play constantly.

MACFORMAT RATING 73%

Paparazzi!
Tales of Tinseltown

Don your grubby raincoat, saddle up your Nikon AF45000i, and shoot some stars. Photograph them, that is, and humiliate them in the national press.

Whoever invented QuickTime, the Macintosh's video player, ought to be executed for crimes against humanity. Preferably something involving red-hot pokers, lots of rope, and a horse. Although even QuickTime's inventor couldn't have foreseen how appallingly QuickTime would be abused by games developers. One more CD full of video clips of programmers putting on silly accents and wobbling the camera about, loosely tied together by buttons you click on, and... well, it doesn't bear thinking about.

Paparazzi! consists of two CDs full of video clips. You're a photographer trying to sell pictures of celebrities in compromising situations to the newspapers. To find them in such situations in the first place, you have to spend each 'game day' flicking through TV channels, playing telephone messages and speaking with contacts.

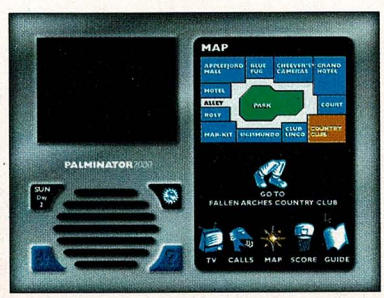
The television clips are spoof news reports and suchlike, the telephone messages are people talking into video cameras in strange accents, and contacts are people in bars and shops. You listen to what they say and deduce where the best place to go is. You then go there, watch another video clip, take two freeze-frames, and see if anyone wants to buy the result.

The idea is interesting in itself, but it makes for a desperately thin game. All you do is peer at these video clips in a little window on the screen, straining to hear the dialogue through your Mac's speaker, and wondering what was going through the minds of the scriptwriters. Most of the developers' efforts seem to have gone into the video clips. They're reasonably well produced, with one or two almost amusing jokes, but clearly consist of a load of programmers and their friends dressed up and putting on silly voices.

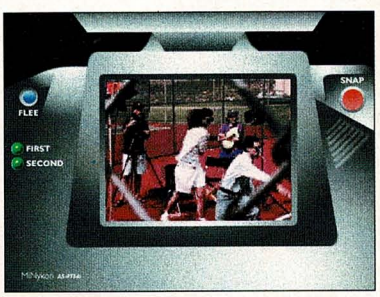
Faced with all this, your attention wavers and minor irritations become major. Although real-life photographers reel off dozens of rolls of film, you can only take two photographs and choose one of them to sell – and if it wasn't taken at the right moment, no one buys it. And all the 'celebrities' are made-up – like Sharon Cheralike and Princess Grizelda – making it difficult to be interested in them.

In time, games made up from lots of loosely-connected video clips will be obsolete, either because people will have realised how terrible they invariably are, or because QuickTime will have been banned by an international agreement. **Jonathan Davies**

There are six characters for you to play. And you can play all of them simultaneously, if you want, although there's no great advantage to this.



This map shows the various locations you can visit in your pursuit of scoops.



We took two photos of Andre MacConner, the tennis player, only to discover that we were supposed to wait until he breaks his racket over someone's head. How could we possibly have known this? *Paparazzi!* is a terrible game.

PAPARAZZI!

Price: £39.99. **Out:** now.
Requires: LCIII or better, 8Mb of RAM, System 7.1.2, 22Mb of free hard disk space, CD-ROM drive.
Contact: Activision on 0181 742 9400

GRAPHICS 65%
Video, plus a few buttons to click on.

SOUND 70%
Music and speech off the CD.

GAMEPLAY 30%
Thin, relying almost entirely on video clips for entertainment.

MACFORMAT RATING 38%

THE CREATORS

Paparazzi! was developed by a Texas based company called Museworthy, Inc, who began life as an advertising company, producing animations and music. *Paparazzi!* is their first game, and they're currently working on their second.

SPOILSPORTS

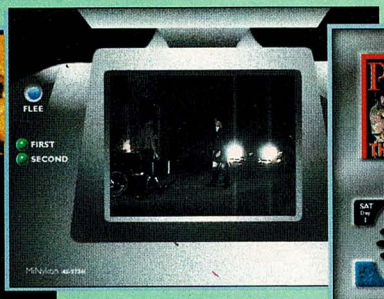
If you get stuck in *Paparazzi!*, the back of the manual contains a complete list of where the celebrities in the game can best be photgraphed, along with a warning not to read it unless you want to ruin the game.

HOW TO GET YOUR SCOOP IN FOUR SIMPLE STEPS

Who needs work experience? If you want to learn how to be a scandal-mongering journalist, load *Paparazzi!* onto your hard drive.

First, scour the TV stations, your contacts, and – in this case – your phone messages for clues.

Deduce the likely whereabouts of the stars, and go there.

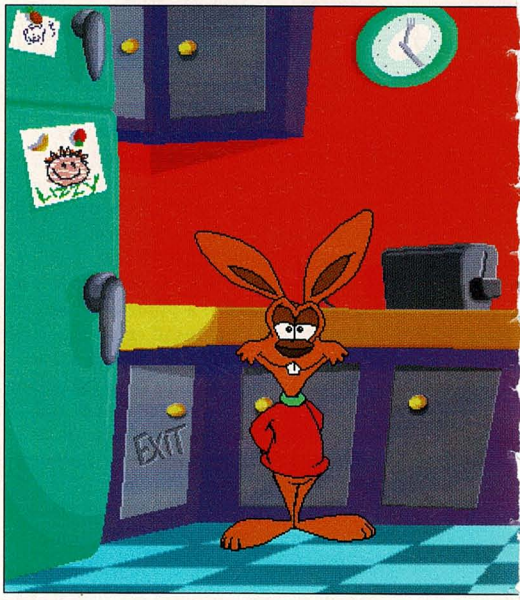


Wait for (precisely) the right moment, then take (exactly) a couple of pictures of them.

With any luck, your picture will appear on the next day's front page as the latest hot news.

Wild Cards and Mario's

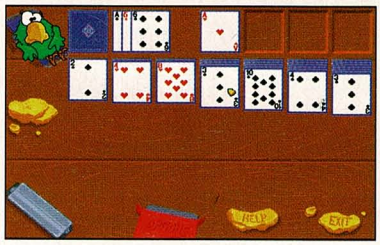
These two CD-ROMs promise to teach standard card and board games to your kids, in a fun and educational way. There's nothing like starting them young!



FULL OF CRAPS

Craps is, in fact, a dice game. You bet money on the outcome of the roll of two dice. A result of 2, 3 or 12 is called craps and is a loser; 7 or 11 is a natural and is a winner. Apparently.

Hmm. Surely the point of *Backgammon, Draughts* and card games is that they're about social interaction as much as passing the time? A way to spend quality time having fun with your kids, rather than a means of sticking them in front of a Mac and forgetting about them for a while.



Plenty goes on in *Wild Cards*. The cartoon characters talk to you, and occasionally do odd things like fall down unexpectedly. Very amusing.

Wild cards

Corel reassures you that, by playing *Wild Cards*, 'your child will learn simple mathematic skills, shape and colour recognition, logical thinking skills'. It enables your kids to play seven card games – *Crazy 8s, Hearts, (Go) Fish, Old Maid, War, 21* and *Klondike* – against up to three cartoon characters, the favourite around here being a pig called Spanky.

The games are played through slick cartoon animations, and there's a variety of settings to choose from. You can play *Fish*, for example, in the kitchen, at a party or in the back of a car. All of them resemble an amiably kooky *Pink Panther* setting. Help is available during any game in the form of an on-line manual – not particularly interactive.

On-line help is available. Here you're in Klondike, with the Jack taking you through the *Wild Card* rules. Not interactively, though.

Mario's Games Gallery

Meanwhile, MacPlay's *Mario's Games Gallery* does not actually feature the

WILD CARDS

Price: £46.94. **Out:** now.
Requires: LC or better, 4Mb of free RAM, System 7 or later, CD-ROM drive, QuickTime.
Contact: Channel Market Makers on 01703 814142.

MACFORMAT RATING 83%

Caesar's Palace

Spend a night gambling your way through *Roulette, Blackjack, Poker* and *Dice* – and never lose a cent. Stake out this new compilation from MacPlay.

PLAYER 4
$992
Placing the bets in *Roulette*. The amount of money you have is shown on the right. You *started* with $1,000.
1ST 12
EVEN

Gambling? It's a mug's game. Take the National Lottery – the only winners are the Churchills. Scratchcards? May as well pay your council tax to Lambeth. Grand National? Horse always wins (except in 1993). No, steer clear, my son.

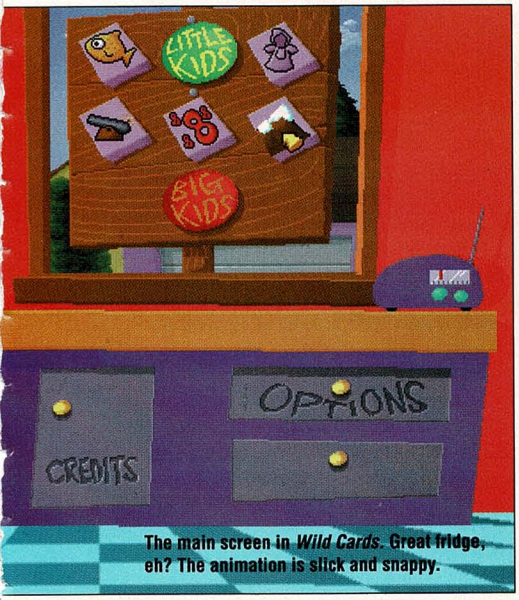
But the desire to gamble, bet, wager, chance, hazard, pledge, risk, speculate, stake and venture is there in many of us. Anyone who's visited a casino can tell you what deeply depressing places they are, full of glassy-eyed people desperate to lose most of their money in a variety of one-armed bandits, roulette wheels, card tables and, increasingly, video machines. There tends to be more free food and drink in the US casinos than in England, but most other things are the same.

MacPlay's *Caesar's Palace* recreates the atmosphere of an American casino in the best way possible. From the main screen you can wander round with your mouse to all sorts of card tables, roulette wheels, slot machines and dice tables. At the various locations you can play games such as *Baccarat, Blackjack, Five* and *Seven Card Stud, Draw* and *Pai-gow Poker, Roulette*, and *Craps* (which is not funny in American English), plus a range of slot and video machines.

You can play at any table against three adversaries, a mixture of computers or humans, and start with any amount of money you like – $1,000

The main screen, where you wander round the tables and decide which one to lose a stack of money on next. But where's the bar?

Game Gallery



The main screen in *Wild Cards*. Great fridge, eh? The animation is slick and snappy.

Super Mario Brothers game that swept the New York Italian plumber to fame, although it does use the music. Instead, you play *Draughts, Backgammon, Dominoes, Yacht* and *Go Fish* against Mario, who laughs and jokes with you through the games.

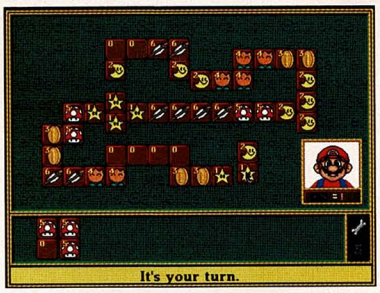
Again, there's no interactive help. Mario doesn't suggest what your next move should be, or give any hints. He just burbles things like 'Hey! Whass a-takin' so long?' and 'I'm a-guess I go feesheen!' in his jolly, reedy little

Taking your opponent's piece in *Mario Draughts* is a grisly affair. But the kids love it. Why aren't all educational materials this much fun?

mock-Italian voice. Brief rules are included in the booklet; they aren't detailed enough for novices, but enough to refresh your memory if you've played, say, *Backgammon* before. The animations are small-scale. In *Draughts*, the two sides are frogs and turtles (from the original *Super Mario*), who scuttle around the board eating each other when a piece is taken.

But what did the kids think? My nephew, who's five, thought Corel's *Wild Cards* was the most fun. My niece, who's ten, preferred the *Mario* set, and got into the gameplaying strategies more. She loved *Draughts* and *Dominoes*, but *Backgammon* might have to wait a few years until she can play it with a human partner.

Verdict? Both are well-implemented and do exactly what they promise.



Backgammon – played with 'yoshis' and 'koppas' – is the most challenging game in *Game Gallery*.

Don't know what Mario's smiling about – anyone would think he'd just won. Hmmmph.

Wild Cards is better entertainment for younger kids; *Mario* is a better introduction to board games for older ones. And they keep your kids out of the way for a few hours. **ROB AINSLEY**

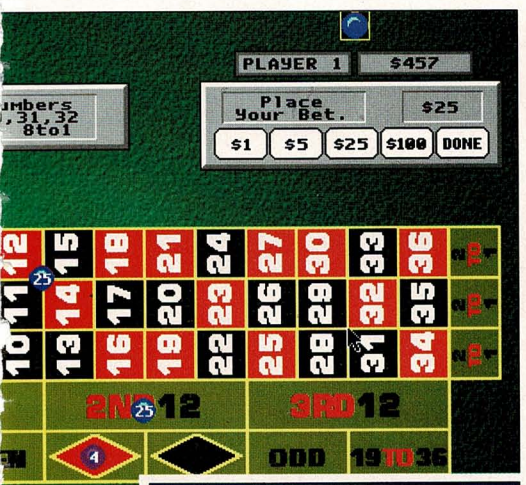
MARIO'S GAME GALLERY

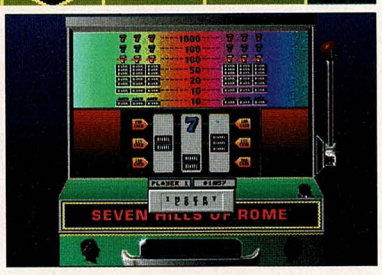
Price: £34.99. **Out:** now.
Requires: any Mac, 1.7Mb of free RAM, System 7 or later, CD-ROM drive.
Contact: Softline on 0181 401 1234.

MACFORMAT RATING 86%

KOPPA LOAD OF THIS

According to our Japanese dictionary, 'koppa' means 'chip' and 'yoshi' means 'proton'. Well, that explains it, then.





A slot machine simulator. Most slot machines seem to be video machines now, so does that make this a simulator simulator?

Baccarat: here's where you bet on whether the player or the bank will win. Sounds suspiciously like betting on Nick Leeson vs Barings.

seems reasonable (hey, that's just pocket money to us computer journalists). You can leave a game at any time, even in the middle of a hand, which you wouldn't do in real life unless your bodyguard was Arnold Schwarzenegger, and take what's left of your winnings to any other table in the casino. The tables have various levels of bets – $1, $5, $25, $100 – depending on how poor you're feeling.

The implementation of the games is excellent – a no-frills, visually bright and clear approach that gives you the essentials sensibly and quickly. Background sounds are mercifully few – a riffling sound when the deck is being shuffled, a 'roulette wheel' noise that sounds remarkably like a stick being trailed along next door's iron railings, and a few bloops and gloops when you win or lose at poker. If you're really into the details, you can select the settings in the various games – minimum and maximum bets, whether splits or doubles are allowed in *Blackjack*, and so on. The booklet has brief but adequate explanations of the rules of all the games, just in case *Craps* is more familiar to you as something else.

The only thing lacking in this game is the bottles of Budweiser you usually get for free when you visit real-life American establishments of this type. Oh, and the bouncers who make sure you pay up. Losing $1,000 was never so much fun. **ROB AINSLEY**

CAESAR'S PALACE

Price: $19.95. **Out:** now.
Requires: any Mac, 2Mb of free RAM, System 6.0.7 or later.
Contact: MacPlay on 001 714 553 3530

MACFORMAT RATING 88%

MR MARIO

Mario's brother is Luigi, and yet the two are known as the Mario Brothers. Possibly some confusion by the Japanese, whose last names are first, and first names last.

PC SPEAK

Just a thought: what do they call one-armed bandits in politically correct America? Manually impaired differently moralled exchange facilitators?

Power Pete

The Prehistoric Plaza, the location for the first three of 15 levels. Lots of apes and dinos await you.

Strap yourself in, put on your shades, take a few deep breaths and prepare yourself for the trip of your life. Things are getting desperate down at the toy store.

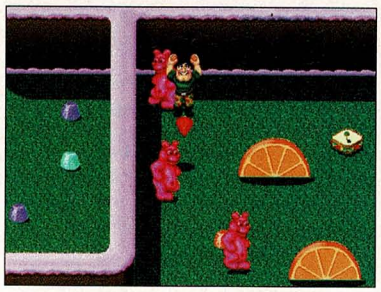
EAT DUST!

You too can experience Power Pete's vocabulary and the plight of the fluffy bunnies. Just check out the demo of *Power Pete* on this month's cover CD.

Eat my dust! Excuse me? If there's one thing that's sure to set the blood boiling, it's being told to eat dust. Are we talking the dust from your shoes? Your clothes? Or are you suggesting we traipse around your house sucking the dust from your carpet?

Power Pete seems to think that eating dust is the ultimate suffering; thus for him to subject you to it (whilst firing a high-caliber rifle in your direction) would suggest that he doesn't like you a great deal. But then Power Pete doesn't like anyone much – unless, that is, he's just managed to blow them to Kingdom Come (wherever that might be), in which case they're merely a lost cause rather than a cause waiting to be lost.

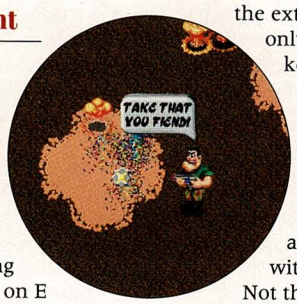
In a high-octane shoot-'em-up festival of missiles, fast flying bullets and, lest we forget them, thrown bones, Power Pete is in his element. The situation? A somewhat unlikely toy-shop setting where some of the toys have gone mad and are holding a wealth of fluffy bunnies hostage. You, or rather Power Pete, a true action man if ever there was one, must shoot said hooligan toys and rescue said bunnies. Simple.



Jelly monsters might not seem like the most fearsome of foes, but they're still best avoided.

Graphically violent

Armed with the aforementioned rifle, some choice phrases and the potential to remove a variety of power-ups from the corpses of his motley crew of opponents, our hero is ideally suited to the job. Charging around like a greyhound on E numbers, shooting and shouting at anything from stuffed dinosaurs to rubber apes, Power Pete neither has the chance to stop for a quick breather nor the inclination. It's a case of kill or be killed, and the longer you hang around in any one location, the more stuffed toys start lumbering in your direction.



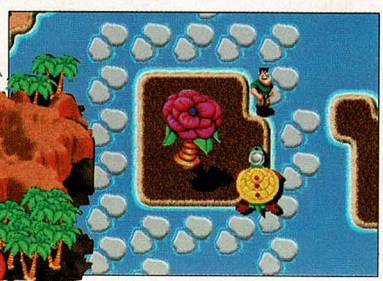
He's got a way with words has Power Pete... About a dozen words in fact, which are the limit of his vocabulary.

When the artists were drawing the vast array of sprites and backdrops, they seem to have been in a rather garish mood. The graphical equivalent of a night out with Ozzy Osbourne, this blaze of pastel shades and vibrant hues mingle with an intensity never before experienced on my Mac.

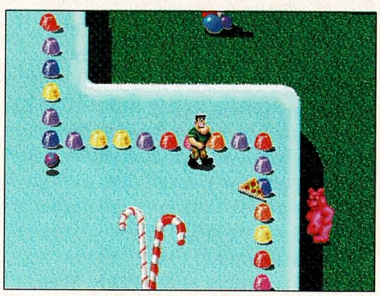
The sure intensity of the graphics is only just matched by the action. Whether you're playing on your own or you've managed to find a friend who's willing to be subjected to this (have you got a colour-blind mate?), the pace of this outing is frenetic in the extreme. It's a good job you only have four directional keys and a fire button to worry about. Any more and you'd be floundering without a second to think.

Not that a lot of thought goes into this game – you run, you fire constantly and you run a bit more. It's all about finding the bunnies and then finding the exit – anything that gets in your way gets blasted, and if you stop for an instant then you're going to regret it. Great stuff, if a little limited in the long term. **PAUL PETTENGALE**

With naught but himself and dilapidated dinosaurs for company, our Pete dispenses justice.



A turtle and a lupin: are you scared? Well you should be, they're that hard.



There's no time to waste on munching fruit pastilles, you've got to fend off dangerous foes.

POWER PETE

Price: £29.78. **Out:** now.
Requires: LCII or better, 5Mb free RAM, System 7 or later, colour monitor and a CD-ROM drive.
Contact: Softline on 0181 401 1234.

GRAPHICS 86%
Whoa! Where are my sunglasses? These graphics are colourful, detailed and oh so bright.

SOUND 67%
Dreadful music, but a great collection of digitised insults.

GAMEPLAY 75%
Run, shoot, run, shoot, run, shoot, ad infinitum. Typical shoot-'em-up fare, though this is even faster than most. Immediately appealing, ultimately boring.

MACFORMAT RATING 80%

MacGOLD Direct ...better by far!

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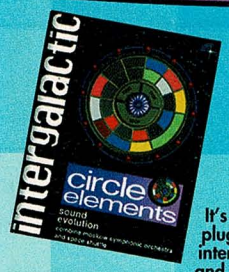

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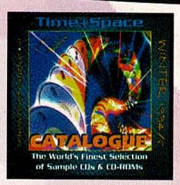

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A group of particularly nasty purple baddies lies between you and the soul you're supposed to be rescuing. This, clearly, makes things harder.

NetherWorld

Arcade action games seem to have a limitless appeal. Were the Cloven-Hoofed One to write a game of his own, it would probably play something like this.

It is impossible to comprehend *NetherWorld*. It has all the makings of a small, entertaining arcade game: it comes on one disk and installs in moments; it's tidily presented, taking you swiftly into the action without any tiresome video footage or anything; the controls are up, down, left, right and fire; it has comical sampled sound effects; and it's based on a thoroughly simple idea. And yet, it's completely terrible.

What you have to do is fly your little ship around a scrolling landscape, shoot the baddies, and rescue people by flying over them. And that's it.

There's a plot, sort of. It's the year 2005, war has been ended thanks to a global peace treaty, and The Beast is consequently short of souls to feed on. So he's decided to send his demonic hordes to raid the Earth.

Um.

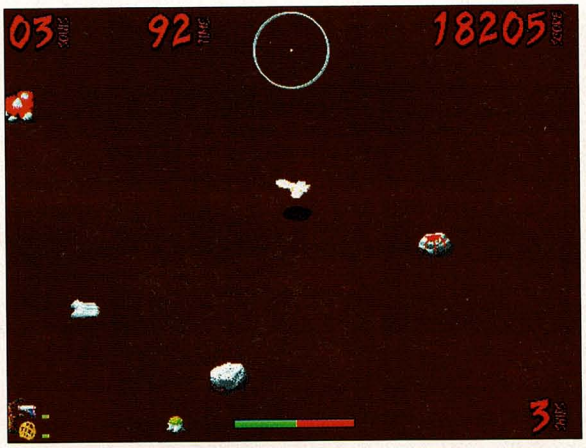
There are a few subtleties. You rescue people by, ostensibly, scooping them up in a net. This net is initially useless, which means you have to fly over people really slowly and risk being molested by baddies. Dead baddies leave power-ups, however, which, among other things, upgrade your net so you can go faster. Other power-ups upgrade your guns, so they kill baddies quicker, repair your shields, add bonus points, that sort of thing.

Judge *NetherWorld* for yourself – try out the demo on this month's CD

A final frisson of excitement is provided by The Prince of Darkness in person, who, if you fail to rescue enough people before the timer reaches zero, appears and chases you around. There's no escaping the archfiend, so rescue those poor souls, or it's curtains for you.

Visually, *NetherWorld* is primitive. Your ship's a titchy thing in the middle of the screen, and the baddies are all crudely-drawn blobs. You don't even get to see the bullets coming out of your guns when you fire, which means you have to refer to a meter in the corner of the screen to see how well you're doing. And there are some amusing sound effects, but you hear them all within eight minutes of starting play.

The scene is therefore set for either (a) a classic, highly addictive arcade game in the mould of *Galaxians* or *Centipede*, or (b) a disaster.



The small, red stain on that rock is the remains of a soul whom you've just flown over too fast, terminating his life. Oops.

You'll laugh the first time you fly too fast over someone you're meant to be rescuing and leave a red stain on the ground, but not the second. You'll become disproportionately annoyed when you lose all your power-ups upon dying. You'll tire of spending most of your time looking at your scanner, rather than the main screen, because that's the easiest way to play *NetherWorld*. And, before too long, you'll throw down your keyboard and cry, 'I am outraged!'

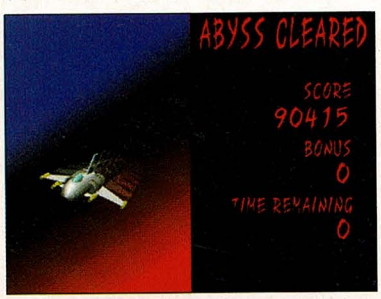
Flying slowly over people and shooting aliens isn't any fun, you see, and the decreasing time limits and increasing people quotas, which are supposed to add to the tension, merely encourage you to give up. Given the simplicity of the whole thing, that then leaves you with nothing. In other words, (b).

JONATHAN DAVIES

WHY?

The word 'netherworld' has existed perfectly happily for centuries, neatly signifying the domain of Satan and his evil hordes. So how come suddenly, in 1995, it is necessary to insert a capital W in the middle and a ™ after it?

You might notice from the meters at the bottom that your net has been upgraded to level three, and your gun to level two. This should make it considerably easier for you to save people.



When you've rescued enough souls, the screen flashes white and this thrilling screen appears. It calculates your score before your eyes, adding bonus points and the time remaining on the timer.

NETHERWORLD

Price: $20 plus $5 p&p. **Out:** now.
Requires: LC or better, 2Mb of RAM, System 7 or later, 256-colour monitor.
Contact: Stick Man Games in the US at e-mail address: JKMorris@eworld.com

GRAPHICS 32%
There are some, yes. But they're not very good.

SOUND 39%
There is some, but it's not great.

GAMEPLAY 29%
Ah, now. There's practically none of this at all. It's very dull.

MACFORMAT RATING 31%

WARNING

The world will actually end in the year 2112. After three months of continuous rain, causing global flooding, the ground will split open and turn all the water to steam. The oceans will boil, and all life on Earth will be destroyed.

YOU WANT SHAREWARE, YOU DO

You can get arcade-style shareware games for a pittance and there are loads on our cover CD each month (see page 117). Try these:

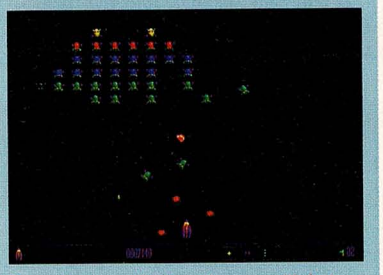
Swoop – classic *Galaxians*-based game. MACFORMAT 27;

SpaceInvader! 1.03 – addictive shoot-'em-up. MACFORMAT 27;

Space Junkie 1.2 – frantic key-bashing action. MACFORMAT 26;

Aperion – a lot like *Asteroids*, but with a polished finish. MACFORMAT 25;

SpaceWar 1.0.4 – two-player madness with added obstacles. MACFORMAT 24.



Swoop is an excellent arcade game with fast, smooth scrolling and great sound effects, and it's available as shareware for only $15.

Conflict Catcher 3

How would you like it if your Mac started up quicker, crashed less and had loads more free RAM? And all thanks to a piece of software that costs £65...

THE COST OF CRASHES

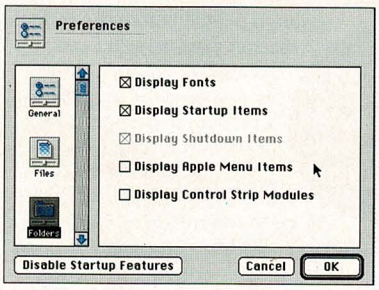
I did a quick back of the envelope calculation to work out the cost in time alone (re-doing the work) of a hard disk crash on my office Mac. It came to more than the cost of the Mac, a year's office rental, a year's worth of electricity, phone and other bills, all insurance premiums and the year's VAT bill. That's frightening.

How do you achieve this miracle, then? Well, you don't have to buy a faster Mac, upgrade your software and plug in some more SIMMs. You may only need *Conflict Catcher 3*.

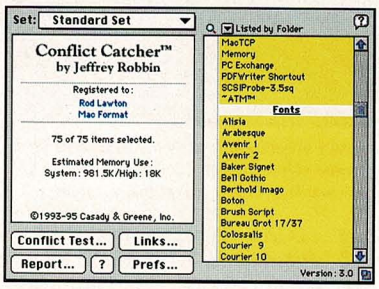
Conflict Catcher 3 is ostensibly a utility for managing your startup files. With all the System Extensions, Control Panels and so on that leap into action during the startup sequence, it's not surprising if you get an occasional conflict. Whether an Extension conflicts with the installed System, the hardware set-up, or another startup file, your Mac crashes.

Not all crashes are caused by these conflicts, but this is a good place to start looking. When you start up your Mac, *Conflict Catcher* registers all the startup files activated and, on demand, presents them in a dialogue. You can list them by memory usage, load order, date they were installed and more. *Conflict Catcher* can scan them all to see if they're damaged, and if this doesn't solve the problem, it can selectively disable them during a conflict test to find the one giving you trouble. Another useful feature is that you can view normally-inaccessible technical information on startup files.

Conflict Catcher also enables you to create sets of startup files so that you can choose from a range of individual Mac set-ups, restart, and use the minimum System Extensions you require. Your Mac starts up faster and you get a surprising amount of extra free RAM.



Conflict Catcher can control your fonts too – useful for DTP operators with too little RAM.



All the highlighted Extensions will load next time you restart your Mac. Click on an Extension to disable it. You can save sets of Extensions.

There's more: *Conflict Catcher* can often resolve conflicts between two startup files by making one load before the other, and it can also 'link' files to identify which ones must always run together and which must never run together. With System 7.1 or later, it will even list and manage fonts.

As a startup file management utility, *Conflict Catcher* is great. As a tool for trapping conflicts it is excellent too –

Personal Backup

It's official: forget watching paint dry or listening to the shipping forecast – backing up your hard drive is by far the most tedious thing in the world. Except...

BACK-UPS ARE QUICK

That's because a utility like *Personal Backup* does incremental backups – it only backs up those files you've changed. And if you back up daily, that's likely to be only a handful of files.

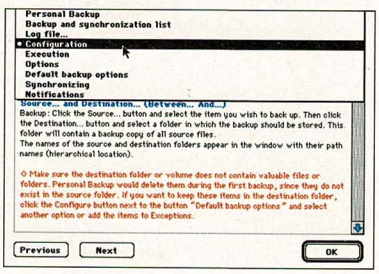
Except trying to piece your life together again if your hard drive should turn up its toes and head for that great SCSI interface in the sky.

Gone are the days when you backed up your hard drive by getting a wheelbarrow full of floppy disks and taking a week off work. Gone, too, are the days when you had to have the self-discipline of a saint to do this regular and incredibly tedious task.

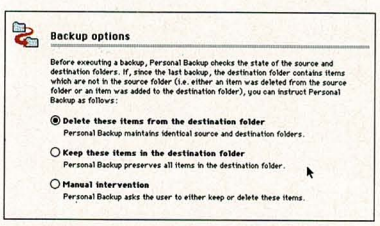
Why? Two reasons, really. First, you don't have to use floppy disks any more. Instead, you can use an external hard drive, a SyQuest drive or even a floptical as affordable alternatives. But even then, heaving megabytes of files from one place to another is a real drag (forgive the pun). Which is where we come to reason number two. You can now buy utilities like *Personal Backup* which do it for you. In fact, *Personal Backup* does rather a lot:

1. It will back up only selected files and folders if you choose.
2. It carries out incremental back-ups – meaning that once you've done your first back-up, only files that have been modified are backed up.
3. It can carry out back-ups in the background – so you don't have to stop working.
4. It will carry out back-ups at fixed times of day, when you shut down or when you hit a user-defined keyboard combination.
5. You can set up lots of different back-up instructions for saving various sets of files to different locations at different times.

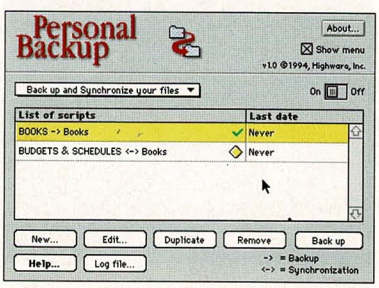
There's more though. Imagine that you use a Mac at home and one at the


Personal Backup
Backup and synchronization list
Log file...
Configuration
Execution
Options
Default backup options
Synchronizing
Notifications
Source... and Destination... (between... And...)
Backup: Click the Source... button and select the item you wish to back up. Then click the Destination... button and select a folder in which the backup should be stored. This folder will contain a backup copy of all source files.
The names of the source and destination folders appear in the window with their path names (hierarchical location).
◇ Make sure the destination folder or volume does not contain valuable files or folders. Personal Backup would delete them during the first backup, since they do not exist in the source folder. If you want to keep these items in the destination folder, click the Configure button next to the button "Default backup options" and select another option or add the items to Exceptions.
Previous
Next
OK

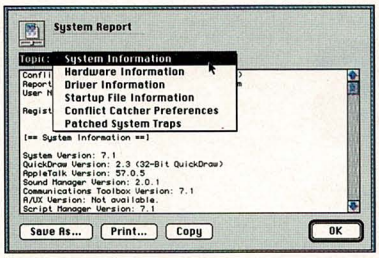
Personal Backup does much more than simply save copies of files – it can also synchronise two sets.


Backup options
Before executing a backup, Personal Backup checks the state of the source and destination folders. If, since the last backup, the destination folder contains items which are not in the source folder (i.e. either an item was deleted from the source folder or an item was added to the destination folder), you can instruct Personal Backup as follows:
Delete these items from the destination folder
Personal Backup maintains identical source and destination folders.
Keep these items in the destination folder
Personal Backup preserves all items in the destination folder.
Manual intervention
Personal Backup asks the user to either keep or delete these items.

If needed, backup volumes can retain old files no longer in the volume you're backing up.



This window shows the backup scripts you've set up. You can create, delete and edit scripts, as well as checking when they last ran and if they worked.



Conflict Catcher can give you information about your System to eliminate those startup crashes.

up to a point. The documentation emphasises the software's 'automatic' conflict testing. In fact, the only thing that is really automatic is that everything is listed in a dialogue for you, so you don't have to drag files out of the Extensions folder. Solving the clash still needs trial and error – disable half the startup files, restart the Mac and see if the problem still occurs, disable half of the remainder, restart again... You find the culprit a hell of a lot sooner than you would without *Conflict Catcher*, but muggins at the keyboard still has to do the restarting.

If all you need is help to keep track of Extensions, shareware alternatives like *ExAminer* (on this issue's cover CD) and freeware like Apple's own *Extensions Manager* (now part of System 7.5) can do the job, even saving sets of Extensions to load together. But *Conflict Catcher* does offer plenty of time-saving ways of tracking down conflicts and dealing with them. Beyond that, it's more useful on a daily basis as a full startup file management system. Ask yourself if you really want your Mac to load up every single font, Extension and Control Panel that every single installed application might need. Wouldn't you rather have more RAM free to play with? £65 might be worth it for you.

ROD LAWTON

CONFLICT CATCHER 3

Price: £65. **Out:** now.
Requires: any Mac, System 7 or later, PowerMac native.
Contact: Softline on 0181 401 1234.

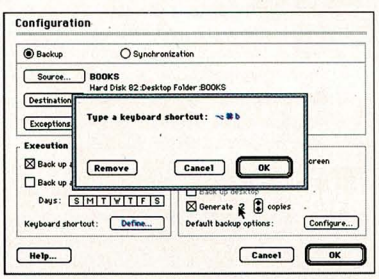
FEATURES 80%
Does everything you could possibly want to do with startup files, even fonts, but not *that* automatically...

EASE OF USE 85%
Hmm, well, pretty good for a complex package, really.

DOCUMENTATION 88%
Comprehensive, but often a bit tortuous to follow.

VALUE FOR MONEY 64%
Worth trying if you get a lot of startup problems or want the extras. For just a startup file manager, try a cheaper option.

MACFORMAT RATING 81%



Backups can be activated automatically, or you can assign a keyboard shortcut to trigger them yourself.

MACFORMAT Classic

office and regularly carry a floppy between the two containing various spreadsheets, letterhead stationery and other assorted files. If you're not careful, you'll end up with all your disks out of sync, with the same files at different stages of development.

Personal Backup's synchronising feature is the answer. It compares two sets of files and checks if they're the same by comparing the dates of matching files. It then overwrites the older files with the more recent ones and copies the files unique to one set into the other set. The result is two identical sets of files in two locations. Like backing-up, synchronisation can be set to happen automaticaly at a set time, in the background, on shutdown, or when you hit a key combination. In comparison, to back up manually would be boring and time-consuming – and you'd have to remember to do it conscientiously.

Until now, backing-up was just too tedious to contemplate. Unfortunately, given the cost of a hard disk crash, especially for business users, not doing regular back-ups is a foolish and short-sighted choice. *Personal Backup* makes the whole process as flexible, simple and effortless as it could possibly be.

Get a SyQuest, get *Personal Backup*, and get your head out of the sand.

ROD LAWTON

PERSONAL BACKUP

Price: £41. **Out:** now.
Requires: any Mac, 2Mb of RAM, System 7.
Contact: Softline on 0181 401 1234.

FEATURES 93%
What else could a back-up utility do? Shame it can't predict crashes...

EASE OF USE 93%
Brilliant. Install it, then forget it's even there.

DOCUMENTATION 85%
Sometimes stuffy, but concise.

VALUE FOR MONEY 90%
£41 isn't much for a one-off insurance.

MACFORMAT RATING 92%

If you thought all videogame magazines were the same...

Think again

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Future PUBLISHING Your guarantee of value

The Official PlayStation Magazine

On sale mid-September

The 'PS' logo and 'PlayStation' are trademarks of Sony Computer Entertainment Inc.

Free reader ads

If there's anything you want, whether hardware or software, or you want to find a local user group, look no further...

HARDWARE FOR SALE

■ LC475 8/160, 14-inch Apple colour monitor, keyboard, System 7.1, CD 300, *HellCats, PGA Tour Golf* – £1,100. ☎ 01234 327128

■ Colour Classic 4/40, System 7.1, exc condition – £500 ono, plus numerous software inc. John ☎ 01604 882642 (after 6pm)

■ LCIII 8/80, System 7.1, boxed, as new, 7 mths old, colour monitor, keyboard, mouse – £550 ovno. Nottingham ☎ 0115 967 8042

■ PowerBook 170 16/125, as new, charger, carry case, manuals, disks – £695 ovno. Nottingham ☎ 0115 967 8042

■ 4x1Mb 30-pin SIMMs – £17 each or £70 for all four. ☎ 01372 450142 or e-mail CompuServe 100614,1474 and leave your e-mail contact address (after 6pm)

■ External combined 2 gigabyte hard disk with 4 gig DAT tape back-up with manual; also SE 5/80 for sale. ☎ 0191 253 2353

■ Mitsubishi QMS A3 colour wax thermal print PISA 32Mb, PostScript, Mac driver board, excellent – £1,750 ono. ☎ 01494 440109

■ Performa 450 4/120, StyleWriter II, monitor, keyboard, mouse, System 7.1, speakers, *ClarisWorks, PC Exchange*, warranty, plus extras, 1 year old – £700 ono. Darren ☎ 01225 312969 (after 7pm)

■ Mac Plus, 1Mb RAM, keyboard, 20Mb Rodime hard drive, AppleTalk cables, System B1-6.1, extras, manuals. David ☎ 01932 562936

■ PowerMac 7100/66 16/250, Apple keyboard, Sony 1730 17-inch monitor & adapter – £2,675; Epson scanner GT 6500 & *Photoshop* – £675; Dec 1152 laser printer – £455. ☎ 01730 892401

■ 7100 video card with 1Mb of VRAM, soldered on card, for 7100 AV card. Shiraj ☎ 0171 250 0233

■ Mac LCII 6/80, 14-inch Performa Plus monitor, exc condition, boxed with manuals & many extras etc – £600. Bedfordshire ☎ 01582 570167

■ Mac Classic 4/40 with CD-150, StyleWriter II printer, pre-installed software inc *Stacker, Suitcase II, Crash Barrier* and *Correct Grammar* – £500 ono. Anthony ☎ 0161 248 7893

■ Performa 200, cost £450, sell for £250, comes complete with original boxes, books & software, also has *RAM Doubler* installed & word processor – demonstration gladly given to prospective buyer, all in perfect condition. ☎ 01604 404767 (anytime)

■ Centris 610 4/80, CPU only – £495; HP DeskWriter 310, 3 mths old – £140 or swap for StyleWriter II. Glasgow ☎ 01505 336738

■ LC 10/40, RGB 12-inch monitor, keyboard, mouse, maths co-processor, all cables, Personal LaserWriter printer, plenty of extras – £1,295 ono; System 7.5.1 manuals. Rory ☎ 01782 750080 (eve) or 01782 750700 (day)

■ Logitech ScanMan hand held scanner – £95 ono. Shiraj ☎ 0171 250 0233 (10am to 5pm)

■ Apple design keyboard, brand new, unused, duplicate gift – £50. Peter, Hants ☎ 01705 597307

■ LC475 8/160, CD 300 Plus, Apple Trinitron monitor, lots of software, too much to mention, nearly new – £1,200 ono. Joe ☎ 01705 871496

■ LC 10/40, 12-inch Apple colour monitor, keyboard, mouse, manuals, System 7.1 upgrade, *ClarisWorks*, home use only, exc condition – £600 ono. ☎ 01895 677410 (eve)

■ Classic 2/40, exc condition, little used, keyboard, mouse, manuals & disks – £300 ono. ☎ 0171 582 8327

■ NEC SilentWriter S62P b/w A4 laserprinter, PostScript level 2, new cartridge installed April, all manuals, installation disc, exc condition, owner upgrading – £500 ono. Ron, Middlesbrough ☎ 01642 591451

■ Apple Laserwriter II, serial CAB161QN 6M6000G, seven yrs old, good working condition, full toner supplied – £300. Tony Jay, Walsall ☎ 01922 643008 (day)

■ Mac Classic 2/40, keyboard, mouse II, exc condition, with swivel stand, dust covers, System disks and manuals – £250. Richard ☎ 01953 602704 (after 5pm)

■ Centris 650 8/240, System 7.1, keyboard, mouse, 14-inch monitor (thousands of colours), *Marathon, Wolfenstein 3D, Links Pro, Iron Helix, PGA Golf, Shanghai II* – £750. ☎ 0181 646 7638 (after 7pm)

■ LCIII 8/80, 14-inch high-res monitor, mouse, keyboard, 16 bit colour, FPU, home use, boxed, as new with manuals, software – £700. Craig ☎ 01376 550973 (eve)

■ Apple StyleWriter II, manuals, dust cover, about ten refills, boxed, as new – £140. Steve, Surrey ☎ 01932 353174

■ Apple 13-inch RGB monitor – £125; Radius 24GX video card – £135; 100Mb external drive – £120; fax modem – £55. Cambridge ☎ 01223 560028 (eve)

■ LC 4/40, 12-inch colour monitor, co-processor, keyboard, mouse – £350; also a 15-inch Nokia Trinitron colour monitor, new, unwanted (came with the bundle) – £250. ☎ 01283 812410 (eve)

■ RAM, two 1Mb 30-pin SIMMs for sale – £30 for the pair. ☎ 01223 415066

■ LCII 4/40, 14-inch colour monitor, full kit inc cables, mouse, keyboard, manuals, disks and StyleWriter printer, home owned, good condition – £500. Jacqui ☎ 0181 202 0025

■ SE30 5/20, keyboard, mouse, microphone, manuals, carrying case, dust cover, Mac stand, cables, System 7, software, good condition – £325 ono. ☎ 01865 728757

■ Classic II 4/40, System 7 with StyleWriter printer (original System disk & menu), inc all software, *WordPerfect, MacWrite II* etc – £450 ono. Paul, Birmingham ☎ 0121 356 7985

■ LCIII 4/80, 14-inch monitor, keyboard, mouse, System 7.1 disks, manuals, boxed, 18 mths old, light use – £550 ono. Nigel ☎ 0131 667 0230

■ Apple Multiscan 15-inch monitor,

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USER GROUPS

Need hands-on help with a Mac problem? Want to swap shareware or freeware, or just meet other Mac enthusiasts? Try a user group near you...

■ Nottingham Computer Club. Please send an SAE to Sherwood Community Centre, Mansfield Road, Nottingham. (MF30)

■ Performance user group/newsletter for home users. Non-commercial. Send large SAE for details. Ref MF, 36 Oakfield Close, Laurel Fields, Potters Bar EN6 2BE. (MF30)

■ Jerusalem, Israel. Tel: Azzedine Downs 972 02 277 376 e-mail: **62876587@e/n.attmail.com**. We are just starting. (MF30)

■ Mac Attack user group, regular newsletter, special reductions, send SAE to 17 Lissadell Drive, Magherafelt, Co Londonderry, BT45 5AR or contact David Gillespie (Director) on 01648 33893. (MF32)

■ Keynet BBS now on-line – 0181 954 0847. For musicians, music, MIDI, *Finale*, *Cubase* etc. Mac, PC, Atari. Two high speed lines, 24 hours. (MF32)

■ The Computer Textile Design Group. The essential link between computer and textile designers. Contact Dee Chester, 12 Le Brun Road, Eastbourne, BN21 2HZ. (MF32)

■ North West Macintosh and Apple user group. Cheshire area, north. Contact Mr Sean McCleery on 01270 624271. (MF33)

■ New Oxford user group. We're currently looking for members, help and shareware. Send an SAE to 30 Sandfield Road, Headington, Oxford OX3 7RJ. Monthly magazine! (MF33)

■ Pentrisoft – the programmers' user group. Distribution, tips and advice. Write to Stéphane Gray, 'Oaklands', Rock Lane, Hastings, East Sussex, TN35 4NY for details. (MF33)

■ Appel Club Eindhoven, The Netherlands. Contact Arie Nagel +3140 523879,e-mail: a.p.nagel@bdk.tue.nl (MF33)

■ The Mac Netsurfer Group – a net discussion group for Mac users. If you're interested, please fax me (Josh) on 0171 328 5888 or e-mail: Maniac@badapple.demon.co.uk (MF33)

■ ClubMac Cork, for all Mac enthusiasts outside of Dublin. Monthly meetings, own Bulletin Board, newsletter etc. Online to Internet at meetings. New members welcome. For details telephone or fax Dominic Murnane on 026 41167 or e-mail dominicm@eirenet.net (MF33)

■ Peter and Paul's Practical Page! The ultimate net hot spot for kids by kids! The e-mail address is: http://inchnd.stir.ac.uk/relstd/kww1/paul/Peter&Paul.html (MF33)

■ MACBEL User Group VZW – Belgium's only non-profit Mac User Group. Bi-monthly magazines, Internet discounts, local BBS support (Telefinders 32-3-4543069) and meetings. Call Bart on 32-3-6404031 or e-mail info@macbel.be (MF34)

■ Mac Jungle BBS on 01235 520507 – Telefinder host – 28.8K V.34 modems – over 1Gig of Mac shareware on-line! Now supporting TLAN conferences daily! (MF34)

Groups will be listed here for six issues, then deleted in order to help weed out defunct groups. The code at the end of each entry is the last issue in which it will appear. If you want your entry renewed, send in the coupon on page 140. If your group isn't listed here, then send us your details!

Please note: this list is provided as a free service for amateur, non-profit-making Mac user groups. MACFORMAT does not endorse or recommend any group and cannot be held responsible for any problems you might suffer as a result of contacting groups advertised here.

boxed, with leads & software, brand new – £215. ☎ 01604 735500 ext 2141 (day) or 01788 578741 (eve)

■ External floppy disk drive, light home use only – £50 or swap for SE30 colour card. York ☎ 01904 791278 (7-9pm wkdays)

■ LC630 8/350, CD, exc condition, boxed, system unit only – £900. Rob ☎ 0181 252 4864 (eve)

■ ImageWriter II, boxed with manual, cable, very light home use – £110. Barry ☎ 01505 872932

■ Apple 12-inch colour monitor, boxed with manuals – £150 ono. Jon, W Sussex ☎ 01243 266919

■ Performa Plus 14-inch monitor – £75; 4Mb 72-pin SIMM – £50; both home use only. ☎ 01564 782618

■ Performa 475 4/250, System 7.5, colour monitor, keyboard, mouse, *Home Publisher*, *ClarisWorks*, Sony D2 2.4X CD-ROM, boxed, under warranty – £1,000. ☎ 0589 530325

■ Performa 400 4/500, 256K VRAM, Performa Plus monitor, keyboard, mouse, manuals, light home use only, all boxed, as new inc Soft PC – £650 ono. ☎ 01684 290375

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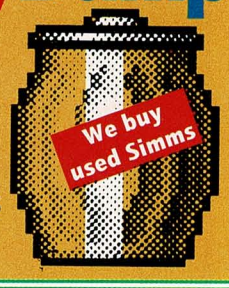

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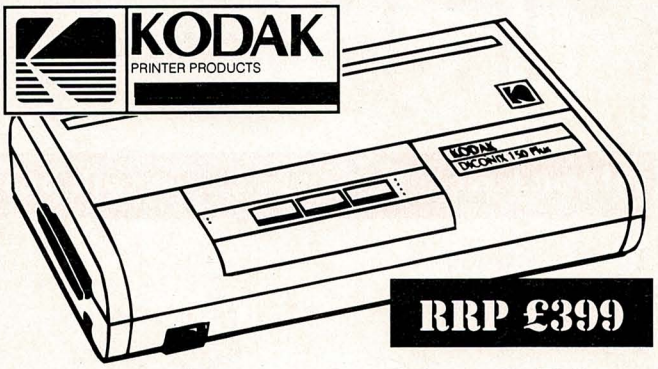

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47,122!

Right on the spot (again!) – the Tiny Zone

Hello and welcome again to the Tiny Zone, the section of MACFORMAT that fills up this space, month in, month out, and never seems to go anywhere. It's been a quiet week round here, because while most of us were slogging away producing the mag, Rich and Derek were... (ahem) *out of the office*. Funny how you never realise how much noise people make – even small green stuffed dinosaurs – until they're not there. Or perhaps we've been quieter, because we've been hard at work – certainly not because we're jealous. Oh no. You see, Rich and Derek jetted off to Boston, USA, for Macworld Expo, the world's premier Macintosh trade show. It's a tough job, you know, having to trek around a huge hall filled with the very latest in Mac software and hardware, meeting the people who are shaping the direction that not just the Mac but *computing* will take in the next year and beyond. It's not easy living on an expense account for seven long days – when you're not being wined and dined by companies touting for coverage of their products, of course. Yep, it's tough, it's hard – and yet, even in these days of Desktop Virtual Reality, instant worldwide telephone links and electronic mail, it's necessary. Sure, you can 'pick up' a digitised object in QuickTime VR and 'turn it around' to examine it from all sides, but that's no substitute for feeling its weight in your own real hands. You can communicate with developers via phone, fax, e-mail or World Wide Web, but that's not the same as meeting them in person and *seeing* how enthusiastic they are about what they do, or asking them *face to face* when they'll get the bugs out and release their product. And no amount of catalogues or mail order ads can match a personal demonstration, so you can *see* what stupid location that switch has been hidden in. As far as we're concerned, the Mac is not just about technology, it's still about *people* too. (But don't some people go on about their travels when they get back...)

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PLUS CD-ROMs for children ■ How to get your database looking right ■ Alone in the Dark (twice!), The Lawnmower Man (also twice), Doom 2 (maybe) ■ How to get your music on the beat ■ The latest news, practical how-to's and authoritative reviews.

ARE YOU A WINNER?

Back in MACFORMAT 25 we gave you the chance to win one of ten copies of *Microsoft Office for the Macintosh 4.2*, a bundle from (now what was that name again?) Microsoft, containing the top-selling word processor *Word 6.0*; the only dedicated Mac spreadsheet application, *Excel 5.0*; Microsoft's presentation package *PowerPoint 4.0*; and *Microsoft Mail 3.2*. Each *Office* bundle is worth £423, and the ten lucky winners are: Rory Doyle of Crewe, Cheshire; Nicholas Baldock of London SE22; Anthony Kearney of Stockport, Cheshire; Roel Neumann from Amsterdam; Lesley D'Wan of London SE12; Raymond Poissonnier of Zaventem, Belgium; the sadly first-name-less C Howlett of Croydon; the equally tragically first-name-deprived C Watkins of Portchester, Hants; Morgan Carpenter of Bromsgrove, Worcs; and Mrs Jean Grzesik of Sheffield. Congratulations to all ten!

MACFORMAT 30 goes on sale on Thursday 28 September

Available with high density floppy disk or CD-ROM. Ask your newsagent to save you a copy or see the insert in this issue for our special subscription offers

Win your choice of MacAcademy videos

Like a personal tutor on tape, a MacAcademy training video can help you master your Mac! We have 25 to be won, worth £47 each, courtesy of MacAcademy.

Manuals are murder, and trial-and-error is asking for trouble. If you want to learn your way around your Mac or your software, the ideal way is to have an expert show you the ropes. Using a MacAcademy training video is like having that expert on hand whenever you need one – with the added advantage that you can work at your own pace, tackle as much or as little as you want at each session, and even come back to a topic or re-check something as many times as you need.

MacAcademy training videos cover just about every software package and aspect of Mac use, with over 100 titles available, and there are tapes for everyone from the novice to the advanced user. They include not just the basics but the shortcuts and tips that power users glean through practical experience.

Each video is around two hours in length, and features a unique on-screen indexing system that enables you to find the topic you want quickly and easily.

MacAcademy videos normally cost £47 each (plus delivery), from MacAcademy (phone 0181 445 5225 or fax 0181 446 3314), but we have no fewer than 25 to be won, courtesy of MacAcademy. If your name is first out of the cardboard box after the closing date, we'll invite you to choose the *five* titles you'd like from the list of 25 on this page. Five runners-up will then be invited to choose *two* tapes each, and then ten consolation prize winners will each receive a video as well – a total of 16 readers will win a prize!

To be one of these 16 lucky winners, just answer the simple questions below and send us your entry on a postcard or the back of a sealed envelope, to arrive by Friday 13 October. Please note that because we'll need to contact you if you win to ask for your choice of titles, we must ask you to include a daytime telephone number, fax number or e-mail address as well as a street address.

The Rules

Employees of MacAcademy, Future Publishing Ltd or associated companies, and their families, are not eligible to enter. Multiple entries are not allowed, unless on VHS video. The editor's decision is final, there is no cash alternative, and no correspondence will be entered into. We reserve the right to disqualify entrants who fail to provide a way for us to contact them quickly. Please state if you don't want your name added to a mailing list. **MF**

The 25 videos to choose from!

Winners will be invited to make their choice out of these 25 titles from MacAcademy's range:

General topics
Design and Layout
Electronic Desktop to Pre-Press, tape 1
Macintosh Basics, tape 1
Macintosh Basics 7.1
Troubleshooting 7.1, tape 1
Troubleshooting 7.5, tape 1

Software specific titles
Canvas 3.5, tape 1
ClarisWorks 4.0, tape 1
Director 4.0, tape 1
Excel 5.0, tape 1
FileMaker Pro 2.0, tape 1
4th Dimension 3.0, tape 1
FreeHand 5.0, tape 1
HyperCard 2.3, tape 1
Illustrator 5.5, tape 1
Microsoft Word 6.0
Nisus Writer 4.0
PageMaker 5.0, tape 1
Painter 3.0
Photoshop 3.0, tape 1
PowerPoint 4.0, tape 1
Premiere 4.0, tape 1
QuarkXPress 3.3, tape 1
SuperPaint 3.5
WordPerfect 3.1

THE QUESTIONS

1. How many MacAcademy training video titles are there?
(a) 16
(b) 25
(c) Over 100

2. MacAcademy videos make it easy for you to find the topic you want on any tape. How do they do that?
(a) They feature a unique on-screen indexing system
(b) They provide a pen and paper so you can make a note of the numbers on your VCR's counter
(c) There's a separate tape for each topic, with a contents label

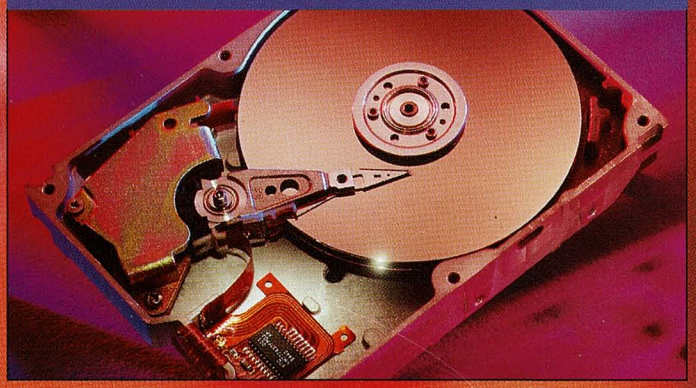
3. What sorts of topics do the MacAcademy training videos cover?
(a) Mac basics and troubleshooting
(b) Software basics
(c) More advanced techniques and tips in various applications
(d) All of the above!

Couldn't be easier if you had a personal tutor to tell you the answers, right? Send your answers on a postcard or sealed envelope (with your name and address, plus phone, fax or e-mail!) to: 'Enrol me in the MacAcademy' competition, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.

AND NOW FROM THAME SYSTEMS

FIREBALL

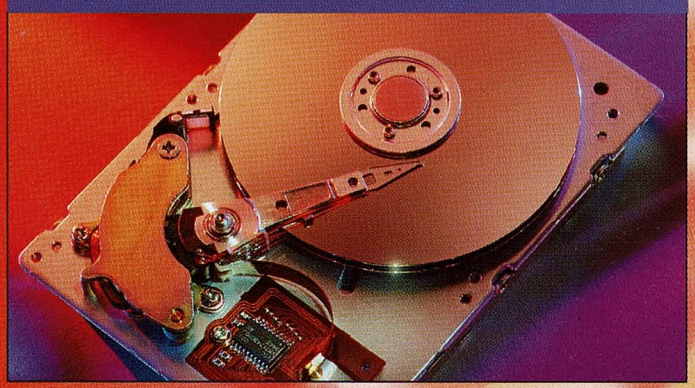
540 AND 1080 AT/S



The Quantum Fireball™ hard disk drives feature leading areal densities and industry leading performance. Available in formatted capacities of 545 MB and 1092 MB, the Fireball drives exceed the demand of business, technical, and multimedia applications running on desktop systems and servers. Performance enhancing features include a SCSI and Fast ATA-2 interface for data transfer rates up to 16.6 MB/second, a PRML read channel for high internal data rates and increased areal density, and Quantum's AutoTransfer™ technology to minimise command overhead.

AND TRAILBLAZER

420 AND 850 AT/S



The Quantum Trailblazer™ 3.5-inch hard disk family provides industry-leading storage solutions for entry-level and mid-range desktop systems. The single-disk 420 MB drive is an ideal choice for the rapidly expanding entry-level corporate PC user, while the 850 MB Trailblazer is aimed at the rapidly growing home PC user. With a revolutionary mechanical platform and performance-enhancing electronics and firm-ware, the Trailblazer drives feature unmatched throughput, reliability, and power savings.

Quantum

THAME SYSTEMS

Thame Park Road, Thame
Oxfordshire OX9 3UQ
Tel. 01844 261226
Fax. 01844 261682

A member of the Raab Karcher Electronics Group raab karcher electronics

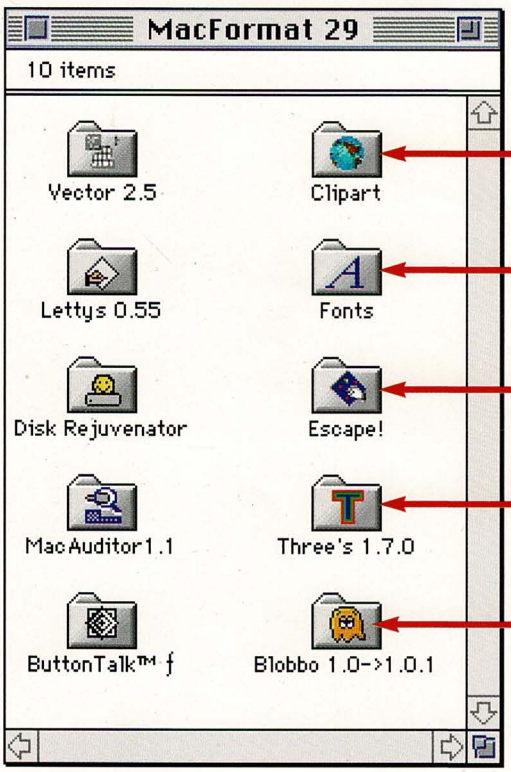
3.5MB OF GREAT CLIP ART, FONTS AND UTILITIES!

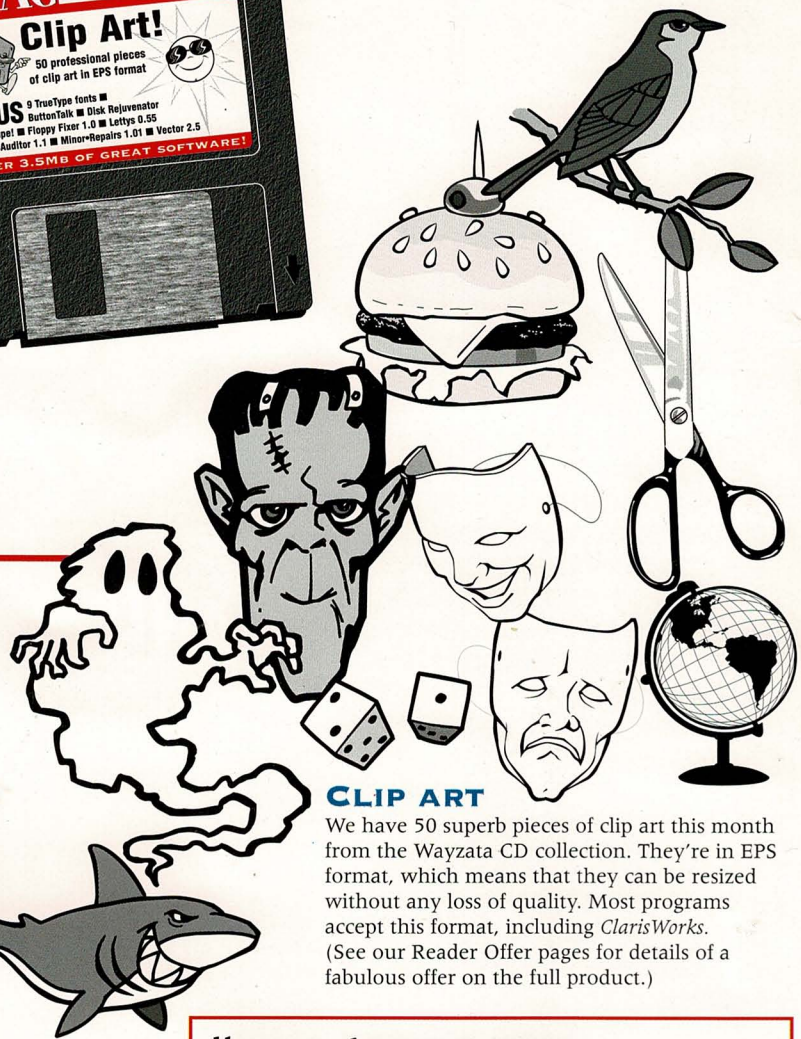
MACFORMAT

ON THE DISK THIS MONTH...

To complement our special black and white issue, we bring you 50 great clip art images from Wayzata and nine excellent fonts to enhance your documents. For hard-core gamers, we have the compulsive puzzle game *Escape*, plus *Three's*, a cunningly different sort of tile game. And for everyone, five handy utilities!

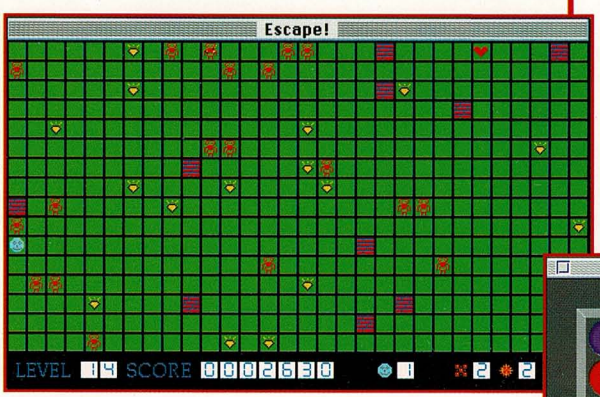
MACFORMAT
Clip Art!
50 professional pieces of clip art in EPS format
PLUS 9 TrueType fonts ■ ButtonTalk ■ Disk Rejuvenator ■ Escape! ■ Floppy Fixer 1.0 ■ Lettys 0.55 ■ MacAuditor 1.1 ■ Minor•Repairs 1.01 ■ Vector 2.5
OVER 3.5MB OF GREAT SOFTWARE!





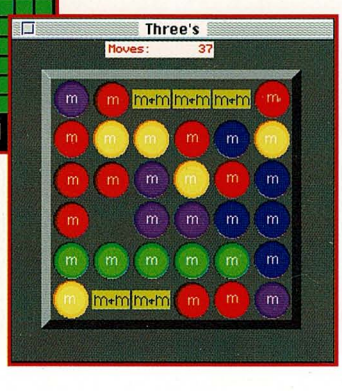
CLIP ART

We have 50 superb pieces of clip art this month from the Wayzata CD collection. They're in EPS format, which means that they can be resized without any loss of quality. Most programs accept this format, including *ClarisWorks*. (See our Reader Offer pages for details of a fabulous offer on the full product.)



GAMES

In *Escape* you're surrounded by homing robots, determined to kill you. Luckily for you, they're as bright as a black hole. Requires: System 6.0.5, any Mac. *Three's* is a colour puzzle game where you have to slide tiles around a grid, but with an unusual twist. The *Blobbo Updater* cures a bug in the game we had on the MACFORMAT 22 disk, which made one level impossible.



HERE IS ADONAIS FONT
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Here is Kashmir Font
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Here is Columba Font
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

HERE IS INDUSTRIAL FONT
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ

FONTS

What better way to enliven any black and white document than to use an interesting font? Here are nine shareware fonts, all in TrueType format, so they will work with any programs and printers. (System 6 Macs require the TrueType Extension.)